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# CANADA

# MEDICAL JOURNAL

AND

## Monthly Record

OF

## MEDICAL AND SURGICAL SCIENCE.


EDITED BY

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VOL V. (1868-69)

MONTREAL:

DAWSON BROTHERS, No. 56 TO 59 GREAT ST. JAMES STREET

BALLIERE BROTHERS, LONDON, PARIS, AND NEW YORK.

1869.

JOHN LOVELL, PRINTER.



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CANADA

# MEDICAL JOURNAL

## ORIGINAL COMMUNICATIONS.

*An Essay on the Contagion, Infection, Portability, and Communicability of the Asiatic Cholera in its relations to Quarantine; with a brief History of its Origin and Course in Canada, from* 1832. By W. MARSDEN, A.M., M.D., ex-President and Governor of the College of Physicians and Surgeons, Canada East; Honorary Fellow Medico-Botanical Society, London; Corresponding Fellow Medical Society, London; Honorary Fellow Montreal Pathological Society; Honorary Fellow Berkshire Medical Institute and Lyceum Natural History; Honorary Fellow Medico-Chirurgical Society, New York; Member by Invitation of the American Medical Association, &c., &c., &c.

Continued from Vol. 4, page 537.

In no instance has Asiatic Cholera made its appearance in any of the country parishes around Quebec, until some one had come to town while the disease existed, and returned home; or some one had gone from town into the country. For example, a plasterer alarmed at the ravages of Cholera in 1832, made an agreement with a Mr. Mimée, the crier of the Court, to go to Leeds, in the county of Quebec, about forty miles distant, to plaster a new house in course of erection. He arrived at his destination, and took up his abode with a farmer in a cottage near the new house. He was taken ill with cholera, and died eight hours after his arrival. The farmer's wife who attended him was the next attacked, and died, and then her husband. The people in her neighbourhood became alarmed, and immediately after the last body was buried, assembled and burned down the cottage with everything in it, and there was no other case of cholera in Leeds. The same summer a beggarman wandered down the north shore of the St. Lawrence to Ange

Gardien, a parish about twelve miles from town. He got lodgings at the house of a farmer named Mathieu. During the night he was attacked with cholera, and died. He was buried immediately, by orders of the parish priest. Mathieu's wife, who attended him, was next attacked, and died, and then her husband. The next person attacked, who died also, was the next door neighbour, a blacksmith, who visited Mathieu's house, and assisted in coffining the bodies. There were no other cases in this parish.

In the beginning of 1833, Asiatic Cholera reached Havanna and Matanzas, on the north side of Cuba. In the course of the summer it reached Tampico, Campeachy, Vera Cruz, and other parts of the Mexican Gulf, creating fearful havoc, and finally reached the city of Mexico. At Tampico, about one half of the inhabitants perished.

The mortality in Quebec and Montreal, in 1832, was as great as at Havanna, being about one-tenth of the population. In many of the rural districts of the Southern States the mortality among the blacks averaged from one-fourth to one-half of their whole number.

In 1832, like the majority of my professional brethren, I was a non-contagionist, and believed firmly in the doctrine published by the Boards of Health of Quebec and Montreal, that cholera was not contagious, but was an epidemic; in fact, was in the air, and that cleanliness and temperance were the best preventives of cholera. To this erroneous and fatal doctrine I attribute the very great mortality in Quebec and Montreal among the respectable and wealthy classes, who were thus thrown off their guard, and exposed themselves unnecessarily, when they might otherwise have been safe, without diminishing their usefulness.

It has been remarked by some writers on each invasion of the pestilence, where it has reappeared, that each successive visitation has been less fatal and malignant than the former one; and some writers have attributed this result to changes in the nature and character of the disease. This is in my opinion an error, as I have seen cases as malignant, sudden, and fatal on the last as on the first visitation. The decrease in the number of cases I attribute to the fact that experience has not been entirely thrown away; but, being "forewarned," they were "forearmed," and so avoided unnecessary exposure. To this we may add the improved hygienic condition of most of the cities and places that have once suffered from the pestilence. So regular and systematic is the progress of this fell scourge, and so immutable are its laws, that to those who have had much experience my narrative will seem like a mere repetition of what they have seen; but the very sameness of the narrative stamps the identity of the facts and the accuracy of the deductions.

The succeeding visitations of Asiatic Cholera, in Lower Canada, were in the years 1834, 1849, 1851, 1852, and 1854. In 1832, 1834, and and 1854, the disease was introduced by European emigrants through the St. Lawrence, passing the imperfect bounds of Quarantine on each occasion. In 1849 and 1851, it crossed the northern boundary between the United States and Canada, and, commencing westward, travelled eastwards to Quebec; whereas in 1852, it came from New York by the River St. Lawrence to Quebec, and then travelled westward.

In 1834, Asiatic Cholera, for the second time, made its appearance in Lower Canada, commencing as before, at Quebec, on the seventh of July. It appeared at Montreal on the eleventh of the same month. On that day, two emigrants, ill with cholera, were carried from the steamboat to the Cholera Sheds. On the twelfth, several cases occurred among the residents, and the earliest cases among them were traced to communication with the Cholera Sheds. This year, as in 1832, its close adherence to emigrants shewed incontrovertibly the agency by which it was transmitted from place to place.

It appeared at Three Rivers, midway between Quebec and Montreal, on the nineteenth of July, that town having escaped the disease in 1832, for reasons to which I before alluded. A fatal case is said to have occurred at the Quarantine Station on the eleventh of June, and isolated cases were said to have appeared in Quebec between that date and the sixth of July, but of this there is no proof. On the very day before the outbreak in Quebec,—the sixth of July,—the brig "John," from Dublin, arrived in port, with 216 emigrant passengers on board, having arrived at Grosse Isle only two days previously, and having had a large number of deaths from cholera on the passage out. Thus the first cases of Asiatic Cholera, both in 1832 and 1834, may be traced to the city of Dublin.

Having alluded to the imperfect system of Quarantine in operation, both at this time and in 1832, I may state that the "John" which arrived at the Quarantine Station on the fourth of July, after a passage of forty-nine days, and after having lost a large number of its passengers by a fatal disease of most malignant type, whether cholera or not, (but of this no doubt can exist, as cholera was raging at Dublin, the port of her departure, when she left,) was permitted to proceed to Quebec almost unimpeded, where she arrived within forty-eight hours. In less than twenty-four hours more, a number of persons in the city, who came into contact with these passengers, were the first to be attacked with cholera, and on that day,—the seventh,—the first death from Asiatic Cholera occurred. Some idea may be formed of the system of Quarantine then

in operation, when told that, besides having no system of separation of passengers from cholera vessels and others at the Quarantine Station, the communication was quite uninterrupted between the Quarantine Station and the city. In fact, when it was notorious to the authorities that deaths from Asiatic Cholera were taking place in the city, pleasure trips, so called, were organized and permitted by the authorities. The following advertisement from the *Quebec Gazette*, of the ninth of July, 1834, speaks for itself: "Pleasure trip to Grosse Isle. The steamer 'John Bull' will leave Hunt's Wharf on Friday next, at noon, remain at Grosse Isle two hours, and return to Quebec in the evening about seven. Fare five shillings; children half price. Dinner, &c., &c., to be had on board. The band of the 32nd or 79th Regiments will be on board." Now it is hardly credible that the authorities would permit this "Pleasure trip," this courting of death, this wooing of desolation, on Friday, the 11th of July, four days after cholera was known to exist in Quebec, and the same day on which cholera had reached Montreal! Yet the "Pleasure trip" did take place, and was both sanctioned and participated in by the highest in the land, as appears by the following extract from the columns of the same newspaper: "The steamer 'British America' was this morning substituted for the 'John Bull,' which did not arrive from Montreal till the former had left after midday for Grosse Isle. The fine weather and the refreshing breeze from the north-west after the almost intolerable heat of the early part of the week, tempted a large number of persons to take a view of the unrivalled scenery of the St. Lawrence from Quebec to the Quarantine Station, now seen in its richest dress, and the excellent band of the 32nd Regiment, which was on board of the steamer, offered an additional inducement. His Excellency the Commander in Chief, accompanied by the heads of the chief military departments and by his staff, was a passenger in the steamer, on his way to inspect the station as a military post. Among the other passengers were very many of the ladies and gentlemen of the city, and a few strangers." *Quem Deus vult perdere prius dementat.* The disease spread rapidly from this time.

This second pestilential invasion of the New World was preceded by similar outbreaks in many parts of Europe, after a certain lull or disappearance of the scourge. After attacking Quebec, Three Rivers and Montreal, it again spread along the course of the Rivers and Lakes to Upper Canada, in one direction, and into New York, New Jersey, Pennsylvania, Maryland, Georgia, &c., in the other, and the greater part of the American Union, again suffered more or less. Halifax and other parts of Nova Scotia were also visited for the first time this year. The culpable silence of the press, as well as of the official authorities after the

re-appearance of the disease, was notorious; and was justly and severely animadverted upon by our American neighbours. Notwithstanding repeated enquiries from New York, it was not until the 20th of July, that the municipal authorities of that city were officially informed of the existence of Asiatic Cholera in Quebec. Among the remarkable instances of infection that occurred in 1834, I will mention that of three gentlemen, Messrs Lespanard, Shadgett, and Dupont, all personal friends and patients of mine, who went to Lake Beauport, a beautiful and healthy place, about twelve miles north of Quebec, to spend a few weeks. On returning to town, they called at the house of a farmer of the name of Bedard, to rest and refresh. On entering the house they were shown into a large room, which was closed when they entered, and having taken a little brandy and water, one of them having a pocket flask containing that liquor, they left for town. They had remarked a peculiar smell on entering the room, which they, however, attributed to its having been shut up; but on mentioning the circumstance to some one they met on their way home, they were told that the farmer's wife had died of cholera in that room about a week before, and that the room had not been opened since. The same night on arriving in town, Mr. Lispenard, till then in perfect health, died of cholera and was buried the following morning. Mr. Shadgett, another of the party, attended the funeral of his friend, and returning home took cholera and died the next morning. The third party, Mr. Dupont, also took the disease, but recovered. There can hardly be any doubt how or where these three gentlemen became infected.

In 1835, cases of cholera continued to manifest themselves at New Orleans and along the course of the Mississippi and Ohio Rivers, and on boats plying on these streams, as well as in Cuba, especially at St. Jago, on the south side of the Island, and at Havana, and finally at Charleston, South Carolina. After 1836, all traces of the pestilence seem to have disappeared from the North American Continent, as well as from Cuba, which was the only West India Island attacked on this second extra-Asiatic campaign.

Nothing more was heard of Asiatic Cholera on this Continent for the space of about twelve years, when the packet ship *New York* arrived at New York from Havre on the 2nd of December, 1848, after twenty-two days passage, with 330 passengers. A great number of the passengers by this ship were Germans, who had come by rail from Germany, (where cholera was prevailing,) to Havre, where they shipped. The weather was cold and boisterous when the vessel neared the Northern Atlantic Coast,

off Cape Sable, when one of the passengers who had a trunk of warm clothing belonging to a person who had died of cholera, took the clothing out and lent it to some of the people to keep them warm. Very soon after a child was taken ill at 3 p.m., and died at 8 p.m. the same day, and another child died soon after with the same symptoms, those of cholera. This was on Tuesday, and on the following Wednesday and Thursday, four men were reported very ill, two of whom died suddenly, with all the symptoms of Asiatic Cholera. A third died from what was regarded as a case of Dysentery. Twelve cases were landed at the Quarantine Station, Staten Island, of whom three died. In fact eighteen cases occurred on board, of whom seven died. On the eighteenth of December, additional cases had occurred among the German emigrants, twenty remaining in hospital, of whom five died, and two new cases were reported. Dr. Whiting had refused to report these cases as cholera (probably because no cholera was known to exist at Havre when the vessel sailed,) nevertheless, the disease spread in the Hospital among the inmates, and on the 20th of December four new cases occurred, three among the inmates of the hospital, one of which proved fatal, and the same day two cases occurred in Wellington Street, New York. Here then re-commenced the pestilence for the third time on this Continent.

The plague also got a foothold at New Orleans, on the 11th of December, 1848. The *Swanton* from Havre arrived there just nine days after the *New York* arrived from the same Port at Staten Island, with 280 emigrants on board. Thirteen passengers had died from cholera on the passage. No Quarantine whatever existed, and the ship came to the wharf. *The day after the arrival of the passengers in this city, cholera broke out, and soon became epidemic.* It then spread rapidly westward along the course of the Rivers. On the 21st, ten days after its outbreak at New Orleans, two boats touched at Memphis having cholera on board. From New York it spread slowly during the cold weather, but as the temperature rose, it spread rapidly in every direction.

Let the non-contagionists and the believers in "mysterious atmospheric influences," note the above facts, the breaking out of Asiatic Cholera at the Quarantine Station at New York on the arrival of the packet ship *New York* from Havre with the disease on board; and the sudden outbreak at New Orleans on the arrival of the ship *Swanton* from the same port, and its subsequent extension, in different directions from both places, as common centres of contagion, and account for the pestilential invasion on any principle but that of infection. In the one case, New York, it progressed slowly, being opposed by some kind of Quarantine,

and in the other, New Orleans, it spread like wild fire, being unresisted.

The pestilence did not this time reach Canada, till the spring of 1849, when for the third time it visited British America. It did not, as on the two former occasions, come from the East by the River St. Lawrence, and travel westward, but entered from the United States frontier westward, and travelled slowly eastward. I would call attention to this circumstance, because, many writers, and especially theorists, have stated that cholera travels from East to West, overlooking the important fact that the disease had its origin in the East, and that the " tide of travel" is westward. On this subject Graves says: there is a *popular idea current, that its course was westward, such was the case in Europe, but in most of Asia it was eastward.* When it travels from East to West it has more to feed upon, because travellers are more numerous, poorer worse fed and clad, and more filthy than those who travel eastward. The Editor of the *British American Medical and Surgical Journal* writing on this subject in 1849, says: During the last and present year it has visited the principal kingdoms of Europe with a rapidity sevenfold more quick, and the history of its westward progress is an object of intense anxiety." Now let me ask the impartial enquirer if the extension and facilities afforded by steam communication and travel by sea and by land (Steamboats and Railroads) will not account for this rapid movement of the pestilence.

In 1849, the first case of the Asiatic Cholera in Canada occurred at Kingston, as early as the 30th of April, whence it seems to have radiated. That city was in direct and constant communication with New York by the New York Central Railroad, and connecting lines, and was therefore first attacked. It did not reach Montreal till the 15th of June, Quebec, 4th of July, Hamilton, 18th of July, and Lachine, 28th of July, and was then prevalent in many parts of the United States, say, New York, Albany, New Orleans, Cincinnati, Buffalo, Chicago, Sandusky, St. Louis, Richmond, Baltimore, Philadelphia, Baton Rouge, Natchez, Memphis, Lexington, Ky., and a few cases had appeared at Boston. In Quebec the first known case of Asiatic Cholera was in Champlain Street, in the person of a shoemaker named McGill, whose business was chiefly among strangers, lumbermen, and travellers. He died after a few hours sickness, during which he was visited by one of the Water Police, a friend of his, who went home and died the next day.

*(To be continued.)*

*Will a Child born after the Mother has had Small Pox, contracted after conception, be liable to take the disease?* By A. H. DAVID, M.D., L.R.C.S.E., &c., &c.

The query, will a child born after the mother has had small pox and contracted after she has conceived be liable to contract the disease? has often been discussed, and I believe I am correct in stating the general impression is, that a child born under such circumstances will *not* take small pox. During a course of very extensive reading, and a practice of over thirty years, I have never met with a case illustrative of this question until within the last few days. I consider it a duty to lay it before the profession through the pages of the *Canada Medical Journal.* I am well aware that one swallow does not make a summer, nor can we build an hypothesis upon a single fact, but one well authenticated case of this kind ought to make us reflect, and have some slight influence in modifying or correcting our theories on the subject.

Some seven or eight years ago I attended a Mrs. E——, through an exceedingly severe attack of small pox; she was at the time in her seventh month of pregnancy, and notwithstanding all I could do, painting her face daily with tinc. iodine, &c., she is much marked with the disease. She carried her child the full time; and some three or four weeks after her recovery from small pox, I confined her of a daughter, whose skin did not exhibit any marks of the disease. As an experiment, I tried twice or thrice vaccination with the child, but as a matter of course did not succeed in getting the vaccine to take, as is universally admitted to be the rule. And now when the child is between seven and eight years old, she has taken small pox and has it rather severely. I consider this case of great interest to the profession. We can scarcely suppose that the fœtus will *not* be influenced by disease under which the mother is suffering; nor that it can escape from the effects such disease usually entails, for the blood circulating through the mother's system must surely carry the disease to the embryo, and produce its effects precisely as it is doing on the constitution of the mother. This case would lead us to infer that such in reality is not the fact, and all our pre-conceived ideas will have to be abandoned. Now as the case is one of great importance, not only to the profession, but to the public at large, and likely to change all our pre-conceived ideas of immunity from disease received in utero, I shall be most happy to take any medical man who feels an interest in the matter, to see the case, and as both the father and mother of the child are living, all the facts, as I have stated them, can be verified, so that there may not exist any doubt about the correctness of my statement.

42 Beaver Hall Terrace, 25th June, 1868.

*Compound comminuted fracture of the lower end of the Humerus and upper third of the Radius Excision of the Elbow Joint—favourable result.* By GEORGE PERKS, Esquire, Surgeon.

On the evening of the 21st February, 1868, I was called upon to see John Wilson, aged 21 years, was told that, about eight hours previously, the elbow of the left arm had been crushed between two railway cars whilst he was engaged in "coupling" them. This had occurred at Omemee, about twenty-eight miles from here, from which place he had been sent forward by rail, the limb having had a splint and bandage applied by Doctor Turner of Milbrook, by whom he had been visited soon after receiving the injury. I was further told that some other medical gentlemen had examined the injured parts, all of whom decided that amputation above the elbow would be required. Patient had lost a large quantity of blood; pulse 80 and tolerably full; pulsation in the radial artery at the wrist perfect; extension and flexion of hand and wrist, to a slight extent, can be made; and sensation in these parts remains unimpaired. A lacerated wound in the integument, over the outer condyle of the humerus, about an inch long, admitted of free examination of the joint. Chloroform having been administered, a free examination was made by introducing the finger. Both condyles of the humerus were found to be broken off, and the outer one very much comminuted. The radius was literally shattered throughout fully one third of its length. The ulna had escaped without fracture. The soft parts, particularly on the outer aspect of the joint, were necessarily very much lacerated and contused, and the external lateral ligament completely divided.

In consultation with Drs. Clemisha and Burnham, by whom I was most ably assisted during the operation, it was decided that no attempt to save the limb would be likely to succeed, unless the comminuted bones were removed. Chloroform having again been administered, an incision was made, commencing at the inner edge of the wound in the integument, over the external condyle of the humerus, and extending across the back of the joint, as far as the internal condyle. Another commencing at the outer edge of the wound, extended about three inches over the shaft of the radius, and a third incision, about one inch in length, commencing at the inner end of first one, over the ulna, completed the outline of the flap, which was dissected off. The detached condyles of the humerus were now carefully dissected out and the end of the bone from which they had been broken, insulated by a retractor, and sawn off. The radius, which was comminuted up to a point, a little beyond the junction of the upper with the middle third, was carefully dissected out and

removed up to the point. As that fracture there was tranverse, neither saw or cutting pliers were required. The parts were now allowed to remain until all bleeding, which was very small in amount, had ceased. Carbolic acid of full strength was freely applied to the whole wound, and the integuments brought together with a few points of iron wire sutures. The limb was now placed on a pillow, slightly flexed at the elbow. The carbolic acid putty, as recommended by Dr. Lister of Glasgow, was now carefully applied over the whole wound, and motion prevented by applying a light splint made of tin plate, with connections of strong wire over the joint. At 11 p.m., a pill containing 2 grs. opium was given.

22nd February, 9 a.m.—Passed a rather restless night; pulse 100; tongue coated; not much thirst; wound discharged a quantity of bloody serum during the night. There is a good deal of swelling, extending from the hand to near the shoulder, which rather increased during the day, and at 10 p.m. has considerable pain. Pulse 110; ordered decoct. aloes comp. ℥ ii, tinct. opii., tinct. ipecac. āa ʒ ss. N. ft. haust. statim sumd.

23rd February, 10 a.m.—Passed a better night; not so much pain; swelling about the same; reddish coloured serum continues to flow from under the dressing, but rather less in quantity and having no smell, excepting of carbolic acid. A mixture composed of carbolic acid one part, to linseed oil four parts, has been freely and frequently applied over the dressings, and the edges of the dressings where the discharge ran, were covered with strips of cotton cloth saturated with this mixture. The pulse had gone down to 90; tongue cleaner; thirst much less.

10 p.m.—Progressing favourably; ordered another dose of laxative medicine which acted during the night.

24th February.—Passed a good night; pain much better; swelling rather less; discharge continues of same character in every respect but less in quantity; pulse 90; appetite up to this time has been poor, but he has to-day taken a little light food. Same application continued. Each day's report is very similar to the above, until 29th February, eight days after the injury, when, upon examining the discharge, a very small quantity of pus was found mixed with it, and upon gentle pressure being made over the dressings, a few bubbles of gas also escaped. The entire dressings were removed. Union by the first intention had taken place along the entire length of the longitudinal incisions, but the transverse one, across the back of the joint, was open and widely separated, the remains of the radius, and the ulna, were well covered, but the end of the humerus was bare about three quarters of an inch; no periosteum adherent, and it was quite evident that a ring of this bone was dead, and

must exfoliate. There was some little sloughing of contused soft parts, but the general appearance of the wound was healthy and granulations springing up; there was no disagreeable smell from the discharges.

8th March.—The wound is filling up with granulations and closing in; swelling very much reduced: the dead portion of the humerus can be seen exposed. To-day the dressings were changed for the water dressing, a weak solution of hyposulphite of soda being used to wet the cloths. This change of treatment was adopted from the belief that the carbolic acid, even in its diluted form, was too stimulating, and I was led to ask myself the very important question whether the death of periosteum, and consequent death of bone, was not occasioned by the too free application of this invaluable agent. To-day the arm is placed on a gutta percha splint extending from the hand to the axilla, giving a comfortable support to the limb, and so arranged that the dressings can be removed without removing the splint.

16th March.—Wound filling with granulations and closing in; very little discharge of pus from around the necrosed bone. To-day a splint made of strong tin plate was fitted and applied; this extended from the shoulder to the hand, admitted of the wound being dressed without removal, and had a joint at the elbow which could be *fixed* or loosened by a screw, so as to admit of alteration of the angle at the elbow. This gives very efficient support, and admits of his carrying the arm in a sling from the neck. He left his bed to-day, and is able to walk about with the injured limb thus supported.

From this time the healing went on rapidly, and now, May 12th, the wound is nearly healed. In it may be seen the dead portion of bone, which to-day was found to be loose. This was seized with a pair of forceps and extracted. The sequestrum was about three quarters of an inch in length, an irregular cylinder, and no difficulty was experienced in its removal.

From this time the progress towards recovery was very favourable and rapid, and the success far better than I had any reason to hope and expect, under the circumstances.

25th May.—The wound is healed; the motions of the limb are weak. In the elbow, extension and flexion are nearly perfect as before the injury. The same may be said of the wrist, fingers and thumb, but rotation of the hand can be performed only to a limited extent, but is still improving.

I almost regret that I did not delay the publication of this case until sufficient time had elapsed for the arm to recover its strength; it has, however, so far progressed as to convince me that it will ultimately prove to be nearly as useful as it was before the injury, both so far as the ex-

tent of its motions and its strength are concerned. I look upon this case as peculiarly valuable in illustrating the value of the carbolic acid in preventing suppuration. Notwithstanding the great extent of the wound, no suppuration took place; no pus was formed until the eighth day, and would not then have formed, but that in consequence of the separation of the wound, the dressings were removed from the surface of the wound, allowing air to enter and remain in contact with the discharges, thus favouring decomposition, the products of which formed an acrid irritating liquid, which led to the formation of the pus. No sooner, however, were the dressings properly adjusted in such a manner that the surface of the wound was covered with a cloth saturated with the acid and oil, and covered with the putty so as effectually to exclude the air, then no more pus was formed. The constitutional disturbance was surprisingly small, not a tithe of what would have taken place under the ordinary treatment.

This was also true in the only other case in which I have had an opportunity of using the carbolic acid to illustrate this feature in its use —a case of compound dislocation of the tibia, and fracture of the fibula. If any objection can be made to this plan of treatment, so far as my very limited experience goes, I should say, that, at least in the strength in which I have used it, it is too stimulating, rather retarding than promoting cicitrization. It was with this view that I was induced to use the water dressing, after the surface of the wound became tolerably level, and when there were no pits, or sinuses, in which the decomposing discharges could accumulate. I had no reason to regret the change; perhaps, however, a still weaker solution of the acid than the one I used might have answered every purpose.

I think this case is a very fair illustration of what may be done in the way of conservative surgery. I am satisfied that the amputating knife is too frequently had recourse to, and if by any efforts of mine, I can be the means of lessening the number of cases, in which recourse is had to this horrible necessity, I shall consider myself amply repaid.

Port Hope, Ontario, 26th May, 1868.

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*Principal causes of the mortality of Montreal, and modes of prevention.* By William H. Mondelet, M.D., Licentiate of the College of Physicians and Surgeons, C. E.

Montreal has many advantages other than its magnificent commercial position. Its situation is beautiful; it is supplied plentifully with water, of a purity which few cities in the world can lay claim to, and its

climate is really as fine as the heart of man can desire. Why, then, it is not among the healthiest cities in the world? The reasons are unfortunately not very far to seek. Its drainage is still defective, except as regards some of the principal streets, and it has no system of scavengering, by which refuse organic matter can be every day taken away. We must add to this the important fact, that the city is built upon a clay or very retentive subsoil, in which poisonous decayed matter is held until it is spread around by the heat of the sun, carrying sickness and death to thousands. This sickness and death might be almost or wholly stopped, by a perfect system of drainage, and a system by which should be carried off, from before every house, every day, the refuse matter thrown out, and which should do away with noisome cesspools connected with wooden drains, under people's windows.

A great deal of money would be required to carry out thoroughly the necessary reforms, and from the expenditure of this, the city fathers have hitherto shrunk. But they would do well to remember, that a healthy balance sheet is not the only desirable thing for a city. The lives of the men, women and children who live in it, are something. To wilfully and knowingly sacrifice them, from causes that might be prevented, is little better than the crime of murder, and the responsibility is fearful. The fact is, that stables, outhouses of every kind, even for the storage of fuel, and cesspools of all kinds, especially connecting with wooden drains, are an utter abomination in respectable streets, and should not be tolerated in a large city. Our American neighbours, at least in the better part of their cities, are much more cleanly and have reached a much higher point in civilization; we confess it with no pleasure. Look for instance, at the better part of Boston, about the common, or some of the upper parts of New York, and there is no such thing as an out-house to be seen, to say nothing of the kind which emit unspeakable stinks. The back lanes of these streets are just as sweet smelling as the front streets themselves, there being nothing but little gardens or grass plots between the rows of houses. The fuel is stored in a sub-basement, under the house itself, which is in every other respect, self containing. All refuse or garbage, instead of being left in large heaps to decay, is taken away every morning. Where the family keeps a horse, it is boarded away at the livery stables, which it may be said *en passant*, are generally kept with the most rigorous care; all manure being carted away every day, and the house where people live is prevented from smelling like the stable, a kind of smell which, however much the inmates may get used to it, must fill the house, in certain conditions of the atmosphere, if the stable is in the yard, near the dining room and bed room windows.

I am told that the land itself is held in these streets subject to the condition that there shall be no erections of any stables or outhouses whatever.

There are many things in the municipal system of Boston which Montreal would do well to copy, for instance: A notice to house keepers and tenants has lately been issued by the Boston authorities, which, I think, if done here would probably have its good effect. It is as follows:—

"All house offal, whether consisting of animal or vegetable substances, shall be placed in suitable vessels, and no ashes or other refuse matter shall be mingled with it, and the same shall be kept in some convenient place to be taken away by the city scavengers, which shall be done as often as twice a week."

"No person without the license of the board of aldermen, shall throw into, or lease, in or upon any street, court, square, lane, alley, or wharf, public square, enclosure, vacant lot, or in any pond or body of water, within the limits of the city, any dead animals, dirt, sawdust, soot, ashes, cinders, shavings, hair, shreds, manure, oyster, clam or lobster shells, waste water, rubbish of any kind, or any refuse animal or vegetable matter whatsoever."

Boston is on the whole clean and sweet smelling, while Montreal, in very many places, is dirty and unsavouring smelling, and that in parts where there is not the slightest need for such a condition; where it is, on the contrary, not only disgraceful but a reproach to civilization. This reproachful condition not only engenders fever and death to thousands, especially to the young, but it hinders (it cannot be too often repeated) Montreal from being so desirable a place to live in as it ought to be, and hinders its progress and prosperity. It is nothing to say that Montreal is prosperous in point of fact. It is so from the force of circumstances; but in spite of the evils of which we speak.

We may not be able, for years, to get streets here without dirty outhouses. But there is no reason why, at once, the system of street drainage, so well begun, should not be perfected, and all wooden drains, connecting with cesspools, abolished and prohibited. No reason why the manure of stables in the city should be allowed to lie for a single day; no reason why the garbage, &c., thrown out of houses, should not be carried off every morning; no reason why the streets should not be regularly and daily swept and the dirt carried away. Complaints are carried daily to the police office, referring to dead animals being left in close proximity to people's dwellings; these latter, if allowed to remain exposed to the temperature and burning sun of the month of July, become putrefied and exhale odours capable of originating fevers and numerous other affections.

As regards public nuisances, as I mean here, has reference exclusively to those sanitary evils met with in places or on property belonging to, or under control of the municipal authorities. It is used in contra distinction to those found on private property. We may not conceal the fact, that the worst form of nuisances are the most difficult to manage, those that before all others claim the attention of the Board of Health, as materially aiding in the generation and accumulation of the causes of endemic and epidemic diseases, are to be traced to matters under the control of the city authorities and not of private individuals. Among the nuisances to which I here allude, may be named the general condition of the highways, as the roadways or streets, side gutters, and surface drainage, street cleaning and disposition of street dirt, the removal of kitchen offal the public docks on the St. Lawrence in front of the city, the present system of communicating with sewers, by private individuals. The emptying of privies and water-closets by connecting drains into sewers, sewage and sewerage, the construction of the inlets to, and the termination or outlet of the sewers, deficient water supply by overcrowding of tenements, the cellar residences.

Under the control of our civic authorities should also range as nuisances, tanneries, butcheries, soap and candle factories, which are allowed and tolerated in our midst. It would seem as if public opinion on that subject were set at nought, or rather public opinion is not felt; people are callous about it, the evil gets worse and worse, the effects stare us in the face, and nothing is done to avert the danger which is apparent; disease overtakes us, people are alarmed, a panic ensues, death is the sequel, a general outcry is heard, and when the danger has passed away, the same indifference returns.

Now, this is intolerable. Legislative action becomes indispensable since our City Fathers will not act. In the meantime let individual energy supply the want of public vigilance and action, and what cannot be effected through public spirit, be attained by means of individual efforts stimulated by the sense of imminent danger of self-preservation.

The slaughtering of cattle in cities, is one of those sanitary evils that is incompatible with the proper enforcement of *Health Laws*, and is a fruitful element in rendering the surrounding atmosphere unfit for healthy respiration.

Interminal slaughtering in England and France, has for many years been held as an intolerable nuisance, and the most conclusive medical and other testimony, may be produced to prove its injurious influences upon the health of cities. To remedy some of the evils arising from city slaughter houses in the absence of more effectual measures, the Board of

Health of the European cities declared all slaughter houses to be nuisances prejudicial to public health, unless the proprietors complied with certain sanitary requirements, and whilst these regulations did create a reform, to some extent, in the slaughter house system, they by no means removed the evils complained of. In answer to the said application, the Board replied that they were not prepared to endorse any particular plan, to recommend any special locality, or to aid and co-operate with any enterprise, at that time, which proposes to establish an abattoir in the vicinity of the city for the slaughtering of cattle; they were, however, clearly of the opinion, that no slaughter houses should be allowed to exist in a populated neighbourhood, but that they should be confined to rural districts and be subject to rigid sanitary supervision. The situation and construction of *abattoirs* or slaughter houses and market places are intimately connected with the supply and emission of water, and deserve somewhat more than a passing notice. Presuming that every one is more or less acquainted with the operations of the common slaughter house, it must be evident that these establishments ought to be situated at a distance not only from the denser portions of our towns, but also from the markets and stalls, beyond every other place, to be liberally supplied with water. So much filth and garbage of a rapidly decomposing kind, is necessarily associated with them, but without an absolute flush of water, and stringent regulations as to its application, they are apt to become centres of the most noisome nuisances and diseases. Notwithstanding these facts, which are but too lamentably apparent in all our large towns, yet as a country have we done almost absolutely nothing towards the establishment of *abattoirs*, to which the animal might be led quietly, and without danger to the inhabitants, where their carcases might be dressed with regard to cleanliness, and where the offal might be sluiced away and collected in such a manner as to become of value to the agriculturist. Our neighbours on the continent are infinitely before us in this respect.

Indeed every precaution that science and experience can suggest, should be made available for the health defences of our population. Public cleanliness, says an English writer, should be a primordial law to be enacted in the existence of every city, while the judicious application of a sound sanitary police, is not only a public safeguard, but its best and cheapest defence. It must be patent to all who have given attention to the subject of sewerage, that no system can be successful in the absence of flushing either natural or artificial, and that such a process to be effected requires a liberal supply of water.

As efficient means should be taken to secure for all towns and cities, a regular and abundant supply of pure water, so ought there to be a

regular system of emission for that which is foul and waste. The rain which falls on our roofs and streets, and the waste water of our houses and public works, with all the animal and vegetable matters, wherewith it is impregnated, must be regularly and speedily carried off, otherwise, stagnation and putridity ensue, deleterious effluvia arise, and are inhaled by the inhabitants, and disease suffering and death are inevitable consequences. The most obvious method of discharge is by open gutters; but as these are offensive and unsightly, the great object, both in ancient and modern times, has been to establish a system of underground sewerage.

Among ancient nations, the Romans carried underground sewerage to the greatest perfection; it is worth while, in these days of existing preachments, briefly to glance at their *Cloacæ*. This term is generally used in reference only to those capacious subterranean vaults, either of stone or brick, through which the foul waters of the city, as well as the streams brought to Rome by the aqueducts, finally discharge themselves into the Tiber, but also includes within its meaning any smaller drain, either wooden pipes or clay tubes, with which almost every house in the city was furnished, to carry off its impurities into the main *conduit*. The whole city was thus intersected by subterranean passages. The most celebrated of the drains was the "*Cloaca Maxima*" the construction of which is ascribed to *Tarquinius Priscus*, and which was formed to carry off the water brought down from the adjacent hills into the *telabrum* and valley of the *Forum*.

The flushing of sewers not only necessitates a large flow of water, but is a costly operation, if thoroughly and properly performed. It is less expensive, however, than the occasional visit of a direful epidemic with attendant evils; the suppression of commercial trade, the wide diffusion of sickness and extensive loss of life. Water closets, even when constructed on proper principles, are frequently liable to obstruction, and when thus obstructed, create a nuisance equal to if not more serious, than a full privy, and far more difficult to remedy. Complaints are made to the police respecting the accumulation of human ordure obstructing the drains from water closets and the nauseous odour arising therefrom, affecting whole neighbourhoods. In England it has been found that water closets, except in well regulated families, are liable to become greater nuisances than ordinary privies. In Glasgow where the sewers empty their foul contents into the Clyde, the tide rising about seven feet and the current of the stream being no more rapid than than that of the St. Lawrence opposite some parts of our city, the system gave rise to a great nuisance.

Notwithstanding the obvious and pressing necessity there exists for such a system of drainage in our large and populated towns, it is well known that there is scarcely one of them that is not notoriously deficient in this respect. Where drain courses do exist, they are either badly constructed, or out of districts most requiring them, while sections are entirely without a single underground channel. Such a state of matters should not exist.

Setting out, then, with the axiom that underground sewerage is preferable both in point of health and convenience to open gutters, the first requisite is a plan of the district to be drained, with all its levels and and facilities of a discharge. Nothing in fact can be done without a declivity for the sewage, and it is this want which occasions that stagnation and putridity so much complained of in many populous districts. Where natural descent is deficient it is the duty of the civil engineer to effect a remedy by carrying the tail or outlet to a greater distance, by inserting steps or falls at certain parts of the sewer, and by contracting and curving the drains occasionally, so as to increase the flow of the current. An important point in the construction of sewers, is their internal dimensions, which, while sufficient for all ordinary purposes, should never be so large as to diminish materially the scouring effect of the water. There is also, another and most important requisite, without which all others would be only partially successful: I mean an abundant supply of water, whereby the sewers might be kept always pretty full, and occasionally thoroughly scoured, from the remotest branch, to the general *embouchure*. If we had such a supply always at command, the open gutter would in many situations be preferable to the underground sewers, and there would be no necessity for those abominations known as cesspools. An overflowing supply of water is therefore necessary, not only for the ordinary purposes of consumption, but for facilitating the removal of that portion which has been used and become impregnated with filth and garbage. Drains are the vehicles of transportation, the water is the moving power or carrier, and is the cheapest that can be procured. In fact the supply of water to a town and the discharge of refuse, are two branches of the same subject, and unless the water is abundant enough and distributed enough to cleanse the drains, these last must be more offensive than useful. Where artificial supplies of water cannot be obtained, the principle of flushing can be advantageously introduced. This consists in fixing in the sewers cast iron gates or sluices, which, when closed, cause the ordinary supply of water to accumulate about them, and when a sufficient quantity is collected, they are thrown open and the rush of water so caused is sufficient to sweep off the deposits.

Such are the requisites for a regular system of drainaged, from which it will be seen that underground sewers are preferable in most instances to open gutters, and that neither can be efficient without a liberal and steady supply of water. I have said nothing of those chemical modes of destroying noxious smells and effluvia, known technically as deodorising and disinfecting, leaving their merits to be discussed under the head of disinfectants, in the latter part of this paper. Neither have I adverted to those numerous mechanical contrivances now in vogue, for the prevention of effluvia from drains, water closets and cesspools: These, like the chemical deodorisers and disinfectants, may be all very good and ingenious in their way, but they do not apply themselves to the root of the evil. What our towns and cities desire is a system of sewerage that would render all such secondary remedies uncalled for and unnecessary; and this brings me to speak of cesspools, a mode too often adopted to get rid of the refuse liquid from houses. In no case, under any plea whatever, should these pits of poison and pestilence be permitted. Let them lie open in any degree and it is impossible to have them hermetically sealed, and they are for ever giving off their noisome and noxious exhalations; they saturate the adjacent soil with their offensive contents; and there is no possibility of preventing the evil without the constantly recurring expense and annoyance of emptying them. The rudest open gutter is preferable in comparison, for it is sure to force itself upon the attention, while the cesspool, out of sight out of mind, is steaming and fermenting with the most subtile and deadly gases. So detrimental and barbarous is this system, that no opportunity should be lost of interdicting its application or of indicting its continuance as an insufferable nuisance; and here it may be remarked in conclusion that, without clear and available powers of law on the part of the corporations, the most perfect system of drainage will often be unavailing. So much ignorance has to be displayed that we firmly believe there are thousands who would not take advantage of a remedial system, though it were gratuitously offered them.

The system of connecting cesspools and privies with sewers, is one of the most reprehensible acts allowed by law. There is thrown into our sewers a flow of undiluted liquid of the most fetid character, rendering them in fact, nothing less than immense cesspools, and polluting them so that no exploration or examination can be made without risk of asphyxia or death. At this point I raise the question, however, whether a change taking place would materially in its effects differ, when to the matter already received in the sewers is added the immense mass of human and other ordure of the entire city in a half dissolved state or suspended in water, especially under the existing system of drainage.

In short, I have no hesitation in expressing the opinion, that with the most favourable circumstances as to elevation of ground plan and descent to river with a deep stream and rapid current, it would be almost impossible to overcome the liability to a deposit, either at the bottom of the sewers or in the vicinity of the outfalls, of solid material, thus offering the same objectionable features, as described, as regards the present system of connecting the cesspools.

The connection of water closets with sewers is an innovation upon the use for which they were originally constructed, inasmuch as they were intended for conveying of water alone.

The experience of engineers in Great Britain, for the last twelve years, has led many to doubt the propriety of adopting such a system to the abandonment of privy wells. The character and habits of our population, the facilities of flushing the sewers, and the nature of the outfall in regard to becoming offensive, should be carefully considered. On the continent of Europe, water closets according to the English fashion, appear to be comparatively little used, except at Hamburg; the objection to them being the loss of so much valuable manure, and the fear of creating nuisances at the surfaces of the sewers.

*Parent Duchatelet*, twenty years ago, came to the conclusion from his experience with Paris sewers, that flushing alone would not cleanse them, and to this day, notwithstanding their immense size, as the largest class are thirteen feet five inches high, constructed with rails or galleries, adapted to cars and sufficiently lighted, for the convenience of workmen; force being necessarily here employed to remove by hand solid substances formed in their depressed bottoms. The same result takes place in the London sewers. Two thousand years ago the Romans understood the necessity for flushing their sewers, for cleansing and purifying the air in them, having learned by sad experience, that the neglect of this means was followed by outbreaks of malignant fevers. They also thought though they used water freely, still they found it necessary to remove substances from them by hand. With the fullest confidence in the integrity and practical skill of our city surveyor, I may be allowed to differ with him in reference to the efficiency of our city sewerage and drainage. I regard the whole of what has been done in these matters, as imperfect. He himself acknowledges that nothing like a system has been followed in the construction of our sewers. Large sewers sometimes discharge their contents into smaller ones, occasionally others have either slopes or steps leading up, when they should be down. This want in regard to the survey of grades and in the construction of sewers, is one of the sad disadvantages resulting from district divisions of the city and resulting in a faulty system of drainage.

Besides, the above complaint, of the Surveyor himself, of the privilege now exercised by individuals of making indiscriminate connections with sewers, is another evidence of the imperfection in question, and if its license continue without interruption he would not be surprised if we are at length called upon to clear our sewers by manual labor of the deposits thus created. Then, again, the plan of surface drainage is a most flagrant nuisance, and which should be remedied by a new system of drainage. Beyond all, I have named the practice of draining privy wells into and connecting water closets and water privies with sewers, together with the horrid condition of the docks along the river front that receive the filth belched forth daily out of the mouth of our sewers, offers still stronger evidence of our own imperfect system of drainage. If the system as at present adopted at Chicago, which in my opinion is only an experiment on a large scale "of connecting water closets and water privies with sewers, and emptying their contents into the river, should prove a success —and this, time only can safely determine, it will be a happy result of a threefold combination in the arrangement of a new city, which no other metropolis has ever enjoyed, the advantage by the superior skill and studied experience of its engineer, based upon a careful, scientific and personal examination of the sewered cities in Europe, the improved uniformity, and correctness of the surveys, the lines, sizes and construction of the sewers, together with a river flowing through the centre of the city, without tide, of an average depth of thirteen feet, seldom varying more than two feet, and ordinarily not one, and a slight but constant flow from the area drained by the river, and waste water from the adjoining canal. During the last two years, there has been very little or no complaint from this cause. But notwithstandlng this favourable presentation of Chicago experience, it has met with great success, and while none of the great cities of Europe furnish so exact a criterion, by which to jndge of the effect of discharging the sewage of Chicago into their river and branches, yet this experience leads me to fear we may get like them.

If our present system of cesspools is, in the language of the city surveyor, an abomination and a nuisance, I am not without authority of opinion, that the continuance of the ordinance, granting permits to connect water closets with sewers, however perfect may be their construction, will constitute, and more certainly in the future, with an increased supply of water power for flushing the sewers, an abomination and nuisance ten-fold more dangerous to the health and comfort of the citizens, than the present cesspool system. The danger apprehended does not depend so much on imperfectly constructed drains from water closets and water

privies, as on the accumulation of the solid and liquid ejecta of the population, in the sewers themselves, and the exposure it is subject to, at low water, as it escapes from the sewer outfall.

The greatest actual innovation upon the original use of sewers, is the immediate connection of water closets with them, and the consequent abandonment of privy vaults. This, however, has not become universal in any large city, yet though very general throughout Great Britain, for the upper and middling classes of houses, the experience of the last ten years has led many to doubt the propriety of its adoption in all cases. The character and the habits of the population, the facilities for flushing the sewers, and the nature of the outfalls, in regard to becoming offensive, should be carefully considered.

On the continent, as I before remarked, water closets according to the English fashion, appeared to be little used except at Hamburg, the objection to them being the loss of so much valuable manure and the fear of creating nuisances at the outfalls of the sewers.

The plan of communicating water closets with sewers, is without doubt an improper and even unlawful innovation. The system, as I have already mentioned, was originally designed for the conveyance of water alone, from open ditches; in course of time, however, the practice of employing them, for the washing of street and house refuse prevailed. Now, every kind of factory with privies and water closets are allowed to communicate with them. This is highly improper, on account of the serious nuisances engendered thereby, and it is certainly an unlawful privilege, unless granted by the Board of Health, that no deposit be made of privy filth, anywhere, within the jurisdiction of the Board of Health, or anything else liable to become a nuisance, without violating a wise health law.

One of the most serious evils connected with our present plan of sewerage, is the over accumulating amount of its offensive solid contents. This collection derived from the fluid and semi-fluid refuse of almost every department of industry that can be enumerated, located within the range of the sewers, both public and private, together with the washings of the streets and alleys, undergoes putrefactive decomposition, and hence becomes the source of the virulent and toxilogical emanations from the sewers, or in their passage through the streets, from the numerous manholes, inlets or less commodious apertures. The danger of the poisonous gases in this city has been on more than one remarkable occasion fearfully experienced, during the advent of various epidemics, especially the cholera of 1832, which scattered death and desolation in

every quarter, to avoid the grievances connected with any system of drainage, and to get rid of the offal of a city in the least objectionable manner, has been and ever should be a *desideratum* with civil engineers, and the custodians of public health. The natural result, however, of adhering to the above named ordinance will be, in my own judgment, the augmentation of the *debris* of our sewage, and should the plan of water closet and water privy connection with sewers become general, as I perceive no prospect of hindering it, their sedimentary deposits will be alarmingly increased in amount. I base this assumption on the investigation made by Dr. Letheby for the commissioners of sewers of London, in which it is shown that the excrement of the population entering into the sewers of that great metropolis constitutes one third of their solid contents, amounting in a single day, to upwards of one hundred and fifty tons.

It must be remembered, therefore, that proportionately to the population of this city, this addition to an already putrefactive mass, would consist of decaying organic compounds of a most offensive character, evolving foul and suffocating gases,even before it enters into the composition of the sewage. Great as is the nuisance arising from the present offensive character and amount of deposit in our sewers, and from thence distributed in our docks along the river front, I for one, would feel myself guilty of maintaining a nuisance should I not firmly protest against a continuance of the practice. Better is it to bare the evils we have than fly to others we know not of. The proper disposal of sewage, and the *excreta* of the population of a large city, are questions as yet unsettled.

While sewerage has met with universal approval, no efficient system has been adopted anywhere; all existing plans abound with defects, and public sentiment in favour of sanitary reform has been so thoroughly aroused, that a problem so important as this will not be suffered to rest until a satisfactory solution is attained. The feeling is becoming very general that, wherever practicable, sewage should not be allowed to pollute water courses of any kind, and the efforts to avoid it have resulted in presenting to the public three classes of projects. The intercepting, irrigating and the deodorising. Impressed with the *paramount* necessity for judicious municipal legislation, in all instances where public hygiene is involved, I am constrained, from a sense of duty, thus to offer my objections to a continuance of the system of making connections with sewers, as relates to water closets and privies.

I am sensitive, however, that the whole subject is far too comprehensive in its bearings to public health to be embraced in this document, far

too grave for hasty legislation. In reference to the granting of permits for making connections with sewers, I would again call the attention of the Corporation or the Health Officer, before any opening be made to connect with sewers, except in cases of water drains from private residences.

*(To be continued.)*

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## REVIEWS AND NOTICES OF BOOKS.

*Therapeutics and Materia Medica; a systematic Treatise on the Action and Uses of Medicinal Agents, including their History and Description.* By Alfred Stillé, M.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania. Third Edition, Revised and Corrected. In 2 volumes. Philadelphia: Henry C. Lea; Montreal: Dawson Brothers. 1868.

It is just eight years since the first edition of Professor Stillé's work was presented to the profession, and we have now to chronicle the receipt of the third. This, we are certain, is a sure indication of the value in which it is held; it speaks more loudly in its favour than could possibly any words we could write. The present edition embraces every article of the Materia Medica in use by the profession. Among the subjects treated of for the first time, we may enumerate chromic acid, carbolic acid, permanganate of potash, nitrous oxide, rhigolene, the sulphites of soda, &c., &c. We consider it is of especial value to students, combining as it does therapeutics with a very excellent description of the articles of the Materia Medica. The strictly scientific portion of the work embraces the consideration of medicines in their physical, chemical and physiological relations. The therapeutic portion is well written, and serves to aid the sagacious reader in explaining the operation of remedies, and to suggest new occasions for their employment. At page 25 of the introduction, we find the following, and so true is the description, that we cannot refrain from copying it:

"Physicians are daily blamed for their inability to save the lives of the sick, and many of them, it is to be feared, do not clearly apprehend, or apprehending, are unwilling to acknowledge, why such narrow boundaries limit the power of medical art. But the difficulty of forming just ideas upon this subject arises from overlooking, or not properly appreciating, the changes of structure produced by disease. When a man's brain is crushed, neither physicians nor even the vulgar expect to see him restored to health, and medicine incurs no blame for his death. But

if the cause of death be rupture of the heart, or an effusion of blood in the central portions of the brain, the fatal result is just as inevitable. Yet the physician only can appreciate this truth; the layman does not perceive why these lesions should necessarily extinguish life, and he can scarcely repress the suspicion that some medical means ought to have been found to prevent the catastrophe which he laments. Other diseases accompanied with visible changes of structure, such as valvular disease of the heart, tumours which arrest the course of the blood or of the chyle through its main channels, and cancerous degeneration, the physician sees terminating fatally without anxiety or self-reproof, while the unlearned half hint that he or his art is responsible for the result. A step further and doubts and difficulties assail the physician almost as much as the non-medical objector; nothing in the visible and tangible changes which the body has undergone can explain the fatal event, and when the propriety of the treatment and the skill of the physician are assailed, they cannot be vindicated to the complete satisfaction of the assailant nor always of the physician himself. His conscience will suggest the questions: Could nothing more nor different have been done? Would not a more experienced practitioner have been successful? And yet, in such cases, death may have been quite as inevitable as if the brain had been shattered, or the heart torn from its vascular connections. Blood of a certain composition is quite as essential to life as the integrity of any of the organs once expressively called *noble;* yet the nature, and still more the degree, of its alteration incompatible with life can only be guessed at."

We feel the full force of Professor Stillé's remarks. Many a time is the physician blamed for not saving life—simply because the cause of death is not as palpable as when a man has his brains dashed out. In such a case, your only satisfaction is in knowing that you performed *all* your duty.

We cannot give our readers a better idea of the arrangement of Professor Stille's volumes, than by copying a few of his remarks on the classification of medicines. He says:

"Many attempts have been made to form a scientific classification of the Materia Medica. The botanical, mineralogical, and chemical arrangements, although recommended by several eminent names, are totally useless to the physician; and the physiological, in consequence of its assuming as a basis of therapeutics, principles which are transient and uncertain, is only a delusive guide. Some writers have despaired of devising an arrangement or nomenclature at once rational and useful, and have taken refuge in an alphabetical catalogue of the articles of the

Materia Medica. The sole merit of this plan is, that it facilitates research in works intended to be used rather for occasional reference than for systematic study. It is destitute of that suggestive power which belongs to natural classifications, and by which one article recalls others of the same nature that may be substituted for it with more or less advantage.

"The most ancient, the most generally employed, and the most convenient classification of medicines is their arrangement in groups corresponding to their sensible operation upon the economy. The original foundation of practical medicine consisted in an attempt to promote the critical phenomena of disease, or, where these did not appear, to imitate them. It was observed that they usually consisted of evacuation from the lungs, stomach, bowels, kidneys, skins, &c., and as it became known, by accident or by experiment, that certain substances occasion similar discharges, they were employed for this purpose in disease. In process of time, and with a more careful observation of the effects of medicines, it became evident that many of these which appeared to be simple, are in reality complex; that many medicines, analogous in their general effects, are yet dissimilar in their secondary or subordinate operations; that many which were regarded as acting upon individual organs, as a whole in reality confine their operation to certain of their anatomical elements; that many natural medicinal substances are composed of two or more active and sometimes discordant elements, &c. * * *

"In the arrangement proposed below, several of these distinctions are observed, and an order of classes is adopted, the general plan of which is that it ascends from the simpler to the more complex forms of medication. At one of its extremities will be found emollients, the action of which is very simple, and for the most part mechanical; while at the opposite end of the ascending scale the class of alteratives is placed, whose mode of cure is totally inexplicable in the present state of our knowledge.

"It will be found that the several classes do not always comprise the same articles which they include in other works. Many, if not all, medicines display diverse qualities according to their dose, combinations, mode, and time of administration, &c., but, as every one possesses some predominant virtue, on account of which it is most frequently prescribed, this circumstance has usually determined the author's choice of its position. In that place its subordinate as well as its cardinal qualities will be examined."

# PERISCOPIC DEPARTMENT.

## Surgery.

### IS TERTIARY SYPHILIS COMMUNICABLE?

A case of Indurated Chancre and Constitutional Syphilis contracted in an unusual manner. Reported by Dr A. M. Sigmund, Shimmersville, Pennsylvania.

On August 24th, 1867, I was called to see Miss M. H., aged seventeen years, well developed, and to all appearance in good health, with the exception of a large and painful ulcer on her upper lip. Upon examination, I found the ulcer to present the following characters: It was situated on the centre of the lip, extending from its anterior margin to near the frænum, oval in form, and, the lip being much swollen, about five-eighths of an inch in its longest diameter. Its surface was hollow, as if scooped out, and covered with a layer of dirty greyish lymph; the edges were hard, slightly elevated, and sloping a little from within outwards; the base well defined, and very hard, feeling, when pressed between the thumb and finger, like a button or ring of fibro-cartilage.

On inquiry, I learned that about two weeks previous the lip had become indurated at the centre, where she had a slight chap, after which the induration increased until it had involved the whole thickness of the lip, and then—about a week after—it commenced to ulcerate. On my informing her that the ulcer was undoubtedly of a syphilitic character, and asking her when and how she became infected, I received the following statement, which, from what I have since learned, I believe to be true. About three weeks before, she had been at a Pic-nic, and was there in company with a young man, (whom *I knew* to have been labouring under *tertiary syphilis*, and had also at that time some indolent sores on the inside of his lips), and that at one time during the day, when he had been smoking a segar through a very beautiful amber mouth-piece, she playfully took it from him and placed it in her mouth. In the evening he accompanied her home, and in parting impressed several kisses upon her lips, one of which was rather prolonged, in order, as he said, to take a good parting kiss, as he would leave the neighborhood in a few days. She felt nothing unusual about the lip until about a week afterward, when the induration commenced; but thinks she had a slight chap, or abrasion on it at that time, where the induration afterward occurred.

On further examination, I found that no visible secondary or constitutional symptoms had as yet developed, *and also, that there was no local disease, or evidence that there had been any, on any other part of her body*. To all appearance the disorder was as yet only local.

I applied solid nitrate of silver—the stick being brought to a fine point—thoroughly to every part of the ulcer, and the slough came away in a few days, the ulcer presenting rather an aggravated condition, where I re-applied the nitrate. From this time it commenced to heal—the nitrate being applied as often as was necessary—and in about three weeks the sore was entirely healed, but considerable hardness remained for some time after, which, however, disappeared entirely under the subsequent constitutional treatment.

I remarked that when I first saw the patient there was only the primary sore on the lips. In the course, however, of a few weeks—about five weeks from the appearance of the local lesion—secondary symptoms manifested themselves; such as the characteristic eruption, sore throat, pain in the ears, joints, &c., enlargements of the cervical glands, with pain extending to the mastoid processes on both sides. She suffered also for some time from rheumatism (syphilitic) of her left arm, preventing its use; she also had some non-suppurating buboes, but only on the left side. The eruption, as I have said, was markedly characteristic, and was most numerous on the forehead, scalp, face, neck, breast and arms; there was also some on the body and lower extremities, but not so numerous. It was at its height about ten days from its appearance, remained stationary about a week, and had disappeared again in three weeks more. The sore throat—not ulcerated, but only a little inflamed—enlargement of the glands, pain in the ears, and some soreness of the joints remained some weeks longer. The whole course of treatment lasted between three and four months, when I discharged her seemingly cured. I have seen her but a few days since and she tells me that she continues in perfect health.

The treatment constitutionally, consisted of iodide of potassium, in doses ranging from five to fifteen grains, three times a day, given in compound syrup of sarsaparilla, with the bi-chloride of mercury in half-grain doses until the gums were slightly touched, when it was omitted; morphine was given to relieve the pain.

A few days after I was called to see this case, a young man came to my office stating that he had a sore lip, which pained him considerably, and that he felt uneasy about it, "especially as he had seen a lady having a very sore lip." On asking more particularly, I learned that he had been in company with the same Miss M. H.—a few days after the sore on her lip had commenced, and not thinking of any danger had kissed her. The sore was not yet large, but had the characteristic appearance of an indurated chancre. I applied nitrate of silver thoroughly then, and again in a few days after, after which it healed nicely, and then gave

the usual constitutional treatment, and up to this time no constitutional symptoms have appeared.

These cases are interesting as instances of the disease being communicated in rather an unusual channel.

The first case is also particularly interesting, as tending to determine the mooted point as to the communicability of tertiary syphilis. There can be no question that the young man had at the time well-defined tertiary syphilis; the sore on the young lady's lip was a well-marked "initial lesion," and followed by "characteristic constitutional syphilis."

[If, as stated by the writer, the young man had well-defined tertiary syphilis, and the young lady contracted her disease from him in the manner stated, the case as reported is certainly one of very unusual interest, as being in direct antagonism to, and subversive of the long accepted teaching of Ricord, that syphilis in its secondary and tertiary stage is not only not inoculable, but that in these stages or forms it loses, in part, its peculiar type. "Secondary symptoms," he says, "are the consequences of the absorption of the virus, and are transmissible by hereditary descent, without being inoculable. Tertiary symptoms are not inoculable, but cannot be transmitted by hereditary descent under their peculiar type, although, in consequence of a kind of degeneration or modification of the syphilitic virus, they are, probably, one of the fruitful sources of scrofula." Again, in speaking of tertiary symptoms, he says, "they never furnish inoculable secretions."

Upon this subject Dr. Bumstead, in his most excellent treatise on venereal diseases, says, that "Ricord's statement that 'secondary symptoms are not capable of inoculation' is true in the guarded sense in which it was intended, viz., that they are not inoculable upon the persons bearing them; but the inference which was also designed to be conveyed is not true, as Ricord himself has since acknowledged. Both are contagious and inoculable upon persons free from syphilitic taints, but neither are auto-inoculable.

"Again, Ricord's statements relative to tertiary symptoms cannot at the present day be implicitly received. This author maintains that tertiary lesions are not inoculable, and cannot be transmitted by hereditary descent under their peculiar type; and hence that the virus in this stage must be entirely changed from its original character. The first of the above assertions is doubtful, the second is incorrect. The inoculability of tertiary symptoms has never been tested upon persons free from syphilitic taint, and its possibility, therefore, may yet be demonstrated, as that of secondary symptoms has been."

In the case above detailed, it will be observed that the virus did not

reproduce symptoms or lesions characteristic of the stage of the disease to which it pertained, but that the virus from the tertiary stage produced the "primary initial lesion"—an indurated chancre, followed by secondary or constitutional symptoms, and reproducing a similar "initial lesion" upon another uninfected person. This case, therefore, if there be no error in regard to it, is particularly interesting, in furnishing evidence of the effect of the inoculation from the virus of tertiary syphilis upon a person free from syphilitic taint, the effect of which, Bumstead says, has never been tested.—ED.]—*Humboldt Medical Archives, April.*

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## Medicine.

### PERMANGANATE OF POTASH IN ACUTE RHEUMATISM.

BY C. M. FENN, M.D., of San Francisco.

An extract from a clinical lecture, delivered by Dr. James F. Duncan, at the Adelaide Hospital, some time ago directed my attention to the use, among other remedies, of permanganate of potash in the treatment of rheumatism. I promised myself to make trial of the remedy at the first opportunity Regarding the so-called chemical theory of the etiology and pathology of rheumatism as, at least, the most plausible, and believing the efficacy of other salts of potash in that disease to be largely due to the measure of oxygen which they contain, it seemed to me that in salt we possessed a remedy admirably adapted to meet all the indications; and that from the fact of its containing so large a proportion of oxygen ($KO, Mn O_3$) and holding the same in such loose affinity, we should be enabled most speedily to promote the transformation of lactic into carbonic acid. In apparent corroboration of this view, I append the record of three cases.

Case 1. Mr. S., salesman, aged thirty, after some unusual exposure was prostrated by a severe attack of rheumatism. Upon an examination of his case the new remedy occurred to my mind. But the urgency of his symptoms was such that it seemed preferable to make use of the medicines we had some confidence in rather than fly to others we know not of. He was, therefore, ordered a preparation of potass, iodide., vin. colch. sem., etc., and submitted to a hypodermic injection of morph. acetas. one-fourth of a grain. To modify the exhausting and troublesome perspiration, he used, on the third day, a vinegar bath, with no appreciable relief. On the fourth day discovering no change in his condi-

tion, other than might be ascribed to the daily hypodermic injections, I requested him to suspend the mixture and have half a grain of the permanganate, three times a day. At my next visit, on the following evening, I was surprised at the marked abatement of all the symptoms. The tongue was quite clean, the perspiration no longer excessive nor disagreeable, and the pains were so far relieved as almost to preclude the continuance of an anodyne. His convalescence was now constant and rapid, and on the tenth day from the commencement of the attack he was again at his post.

Case 2. Mrs. G., aged thirty-five, of full habit and previously healthy, was attacked during the passage from New York. There had been a considerable amelioration of the more violent symptoms at the the time of her arrival here; but some of the larger joints were still tumid and painful. The permanganate of potash was resorted to, and in a few days she was able to attend to her household duties.

The third case I regarded as, in some sense, a crucial test of the remedy. The patient, a man in middle life, had long been a victim distorted with tophaceous deposits, and the malady was so far incurable. This was varied, however, at intervals of two or three months with acute attacks, which apparently resisted all the usual remedies, and expended their force in from two to three weeks. I had previously attended him in several of these attacks, and found the common remedies, colchicum, acetate of potash in larger doses, &c., of but little avail. I now put him on the permanganate, and had the pleasure of seeing him on the street in seven days.

I find the raspberry syrup to be the best menstruum, as it disguises the somewhat nauseous taste of the medicine completely.—*Detroit Review.—St. Louis Medical Reporter.*

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## CASES OF COPPER POISONING OCCURRING AMONGST THE OUT-PATIENTS OF ST. THOMAS'S HOSPITAL.

By Edward Clapton, M.D., Assistant-Physician to the Hospital.

About a year ago a sailor came under my care suffering from chronic gastro enteritis and other symptoms indicative of some metallic poisoning. He was a miserable object, and stated that he had been compelled during the whole time of a long voyage to drink lemon-juice which was kept in a copper tank. He informed me that all the crew suffered similarly to himself. I intended seeking out the vessel and making inquires into the matter, but the man did not make his appearance again—the unsatisfactory and not uncommon occurrence amongst the out-patients, especially

in respect of the most interesting and important cases. One peculiarity in this man's symptoms, which I made a particular note of at the time, was the existence of a most marked green line on the margin of the gums, and for some little distance on the teeth.

Not long after I noticed a similar appearance in a young woman who was an artificial flower maker, and who stated that she was in the habit of inhaling the dust of verdigris and Scheele's green, which she was obliged constantly to use in her business.

Last week, again, a patient came under my care in whom the same appearance was observed—viz., a dark green line on the edge of the gums, and a similar stain along at least half of each tooth. He was a coppersmith, working at Penn's Factory, Deptford. His general symptoms, which were of a chronic character, were vertigo, gastrodynia, flatulence, dyspnœa, frequent vomiting, some degrees of wasting of the body, and a peculiar coppery taste. His tongue was moist and flabby, and pulse hard and full. He mentioned that there were fifteen others working in the same shop, and, in consequence of the information which he gave me I called at the factory to-day, and was permitted to inspect the premises, and to examine the rest of the workmen.

Even with the greatest care, it is impossible to prevent the inhalation of copper particles or fumes. The dust of the shop, when viewed in a bright ray of light, can be distinctly seen to be charged with bright metallic particles. Water, too, kept in any vessel in the room for a short time, can be shown, by tests, to be charged with copper. The fumes given off during the process of strongly heating the copper for the purpose of joining appear to be most injurious. The workmen say they have rarely suffered from any definite illness, but all complained of lassitude and giddiness, and a disinclination, when not at work, to take exercise or "to go about," as other workmen. Some of them were exceedingly thin and pallid. *All of them had a green stain on their teeth*, of different shades of colour, varying from a light bright green to a dark greenish brown. Their perspiration had a bluish-green tinge. I examined the flannel waistcoats of several, and found them deeply stained, especially under the arms. One of them stated that, even after a hot bath on Saturday night, his white shirit next day, if in hot weather, would be quickly discoloured. I noticed, too, that the wooden handles of all the hammers were stained green, from perspiration of the hands.

I briefly mention these cases now in the hope of gaining further information as to these appearances, which I have not seen noticed; but I shall recur to the subject in a paper on an allied disease (plumbism), which I have in preparation.—*Medical Times and Gazette.*

# Canada Medical Journal.

MONTREAL, JULY, 1868.

## THE INQUEST ON MARY BOYD OF TORONTO.

On the 5th and 6th of May last, Wm. Hallowell, M.D., Coroner for the city of Toronto, held an inquest on the body of Mary Boyd at the Provincial Lunatic Asylum, in which institution she had died. She had been conveyed there in a state of mental derangement after an attempt to commit suicide by cutting her throat.

A post mortem examination disclosed the fact, that she had died from inflammation of the lungs which had resulted from the wound inflicted on the air passages. The Coroner's jury, which, it is stated, was a very respectable one, gave a verdict of "*Felo de se*, while labouring under temporary insanity." The Jury in addition submitted that they could "not part without recording their sense of the highly improper medical treatment pursued by Dr. Campbell towards the said deceased Mary Boyd. This action on their part is based upon the evidence of high medical authority adduced in the course of a long and painful investigation of a very melancholy case of suicide before Coroner Hallowell." This censure upon the practice of Dr. Campbell, who is a Homœopathic practitioner of Toronto, which appeared in the dailies of that city, with an account of the investigation, and in one journal with some animadversion upon the conduct of Dr. Campbell, was followed by a letter from that person in which he undertook to justify himself. In doing this Dr. Campbell cast reflection upon the course of treatment Mary Boyd had received in the Asylum. Dr. Workman, the medical superintendent, in replying said, "the communication of Dr. Campbell has imposed on me the unpleasant necessity of requesting space in your columns for a few observations on the mournful case of the late Mary Boyd, which I would gladly have been spared from presenting to your readers. But the ill-advised and untruthful statements of your correspondent, together with my conviction of official public responsibility, and a solemn regard to the interests of humanity and truth, appear to me to render it imperative that I should not pass over in silence the numerous untrue assertions and gross exaggerations of fact, involved in his communication."

Dr. Workman's communication had the effect of arousing Dr. Campbell to pen a lengthy dialogue, which, it is alleged, took place between Dr. Campbell and a Mr. Blank, in which the latter personage is made to say all sorts of unpleasant things, give utterance to foul assertions and insinuations respecting the medical gentlemen who had given testimony at the trial, and attribute motives of the most atrocious nature to those gentlemen; while at the same time he is conveniently made to laud homœopathy, relate the professional attainments of Dr. Campbell, and reiterate in fulsome language the great success of Dr. Campbell's practice. When we consider the length of the dialogue, the unmanly way in which gentlemen of well known integrity are maligned, and nothing less then perjury laid to their charge, we do not wonder that the influential and respectable journal to which it was sent refused to allow it space. The result of this refusal has been that Dr. Campbell, has, in a pamphlet form, published not alone this extraordinary dialogue but an account of the whole matter, interspersed with numerous foot notes, and with a free use of *italics*. This, he declares, has been sent to every medical pratitioner in the country. The burden of Dr. Campbell's effort is to make it appear that he is the victim of a *conspiracy*, because he is a homœopathic physician. The attempt to make this appear is apparent upon every page, indeed in almost every sentence. It is not our intention to follow the writer in his unseemly work of self-laudation. We do not desire to say a word about Dr. Campbell or homœopathy at this time. But we conceive it would be a dereliction of duty on our part if we did not refer to the charge which it is attempted to fasten upon the Medical profession. Had Dr. Campbell and other irregular practitioners alone assailed the character of the profession, it would have been but a matter of ridicule, but when highly respectable journals, such as the *Leader* and *Globe* of Toronto, reiterate the charges, and bring railing accusations against men who honestly perform their duty, we feel the time has come when we should indignantly protest against such direct insult and slander. The insult and the slander are not merely upon the professional honour of the educated gentlemen, but upon their veracity as sworn witnesses. The profession, in their daily course of practice, are accustomed to see the counterfeit passing current among the public, and utter not a word, being well assured that any attempt to expose the charlatan will be at once decried as a persecution, and the result of jealousy. The stereotyped phrase that new sciences are always subject to persecution will be called into use. But as here a medical man is placed in the witness box, he must needs tell the truth. And we submit that when he takes the oath to tell the truth, the whole truth and nothing

but the truth, his testimony should be received without his being exposed to gross charges, unless those charges can be substantiated. We think it ill becomes public journals to reiterate if not to actually make such charges.

The statement of the *Toronto Leader* that "Dr. Campbell has been made the object of a very bitter attack mainly because he is a homœopathic physician, and the President of the Homœopathic Board" requires proof. The declaration of the *Toronto Globe*, that the jury acted "under the promptings of a ring of doctors of a rival school," "that the charges against Dr. Campbell were trumped up against him by Medical rivals" is one that no conscientious journal would hastily make. If the writers verily believe these assertions so derogatory to the character of the gentlemen referred to, then we submit they are grossly partizan, and neglectful of the first principles they pretend in this connection to inculcate.

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## THE REPORT OF THE TRUSTEES OF THE TORONTO HOSPITAL.

We give below the able report of the recently appointed Trustees of the Toronto Hospital, which will, we are sure, commend itself to the attention of the Ontario Government, and the general public. We would congratulate the Premier of Ontario, on the wise selection he has made in appointing the present Board, and the Board upon producing so clear and concise a statement of the condition of the Hospital. We have not space to speak at large upon the several points embraced in the document, and it would be far from pleasant to examine into the history of the past management of this charity. That an institution so necessary to the welfare of the public, and located in the capital of the wealthy province of Ontario, should have been closed for want of means to maintain it, must be regarded as a disgrace. But we feel strong hopes for its future prosperity. The spirit, energy, and thoughtfulness which pervades the report, leads us to believe that this important public charity will shortly be placed upon a basis which shall ensure its perpetual usefulness. We trust the Government will also afford to kindred institutions in the province the necessary aid to increase their usefulness. We heartily concur with the report that "it would be better to declare them," that is, the several hospitals in Ontario, "to be, what already they practically are, public general hospitals, and to provide for them accordingly."

Pleased with the report in its general nature, we are particularly so in respect to its bearings upon medical questions. The trustees took a

judicious step in consulting the medical profession, and evidently have profited by the information thus derived. The suggestions made by the Board as regards the medical arrangements are, we think, excellent. It is a cause of great satisfaction that in considering the whole question the interests of the Profession have not been forgotten; not merely that it is thought desirable to advance the interests of that profession, but because it will subserve the interests of the public to secure the best possible instruction for a class of men who are destined to become medical practitioners throughout the country. The recognition of this fact is invaluable. The report says, "since the closing of the Toronto Hospital many students have been obliged to go elsewhere in search of that teaching which they cannot acquire here." In thus looking for the advantages of hospital training the students have displayed a sound judgment. However desirable it may be for the schools of medicine at Toronto to retain within their walls the young men engaged in the pursuit of medical education, the student wisely consults his own best interests in seeking that essential aid to his studies, and that valuable information which a well appointed hospital supplies. And this brings us to another point upon which we design to speak.

We have reason to believe that the trustees intend, in appointing the medical staff to the Hospital, when it shall re-open, to select an equal number of the teachers from the two medical schools situated in Toronto and Yorkville, and a certain number from among the leading practitioners of the city. No other course could with justice be pursued. The student attending the hospital ought to enjoy the privilege of following his own teacher through the wards, and also the additional advantage of witnessing the practice of others with whom he is not so intimately associated. While there may be with propriety an intimacy between teacher and pupil, there should be a freedom of access between every member of the staff and every student who pays a fee for his hospital ticket. Justice can give him nothing less. The hospital should be neutral ground, as it is a public institution. The public provides for the maintenance and treatment of the sick, and desires that the medical student shall be profited thereby. The student purchases his privileges by the payment of a fee, and has a legal right to all the advantages which present themselves, and no medical attendant can deny the equal rights of all who attend, whether at the bed side, upon the operating table, or in clinical utterances.

Further, the students, as well as the patients, have a right to demand the regular attendance of the medical officer. We respectfully submit that every member of the staff in accepting his appointment engages to

serve the institution faithfully. He undertakes, for the honour the appointment confers, to give due and reasonable attention to the calls which will be made upon him, as a public officer. It is not just either to the sick and distressed patient to be left sitting in the waiting room hour after hour, or to the student who spends his time and walks no little distance to be compelled to wait in idleness hour after hour. We cannot look back complacently upon what we have experienced and witnessed in the Toronto Hospital with regard to vain waiting upon the easy movements of those who had assumed the duties of medical attendants. If the private engagements of any one will not allow him a reasonable portion of his time for hospital duties, he has no right to accept the post. We would, with the best intentions, respectfully suggest to the Board of Trustees to intimate to each gentleman appointed, that a failure on his part to attend to his duties will be considered equivalent to a resignation of office.

Under the new *regime* we earnestly hope there will never appear any indications of a petty jealousy on the part of rival schools. By all means let there be rivalry; but let it be to see which can furnish the most thoroughly educated gentlemen. Let the precincts of the hospital constitute a sacred ground whereon may be exhibited the kindlier feelings of the human heart.

## TORONTO HOSPITAL.

### REPORT OF THE TRUSTEES TO THE LIEUT.-GOVERNOR.

The trustees of the Toronto General Hospital have presented the following report on the condition of this Institution to His Excellency the Lieut.-Governor:—

*To His Excellency Major General Henry William Stisted, C.B. Lieutenant-Governor of the Province of Ontario, &c.*

The Trustees of the Toronto General Hospital beg leave to report, that when they met in the month of May last, for the purpose of organization after the appointment of the three new Government members, the affairs of the Hospital were in the following condition:

The Hospital was closed, the Steward alone being in charge as care-taker, from the time the patients were removed from it last autumn.

| | |
|---|---|
| The unpaid debts for groceries and other necessaries, medicines, wages, firing, repairs, and insurance were..... | $4,872 42 |
| And the arrears of interest on Debentures amounted to..... | 2,640 00 |
| Making a total of..... | $7,512 42 |

which has since been paid.

The assets which the trustees believed they would have had at their disposal this year were—

| | | |
|---|---|---|
| The grant of the Ontario legislature | | $11.200 00 |
| The half-yearly allowance for 1867, which it was supposed would have been voted by the Dominion legislature | | 5,600 00 |
| Rents and interest receivable | $5,181.98 | |
| Less interest on debenture debt | 4,320.00 | 861 98 |
| Cash on hand | | 575 82 |
| Total | | $18.237 80 |
| Deduct payment as above | | 7,512 42 |
| Leaving the sum of | | $10,725 38 |

to be applied in maintaining the hospital for the residue of the year and which would have been about sufficient for the purpose.

The Dominion Legislature did not, however, vote the half yearly sum, on which reliance was placed, that amount must therefore be deducted, viz., $5,600.

| | | |
|---|---|---|
| Leaving only for the services of this year | | $5,125 38 |
| But from this has also to be withdrawn the further sum for repairs already under contract | $839 | |
| And further repairs, estimated for, which must be done to preserve the building from actual destruction, say. 461 | 1.300 00 | |
| Leaving in hand for strictly hospital purposes only | | $3,825 38 |

To ascertain the extent of repairs required the trustees visited the building, and found it, in many places, so seriously affected, by settling of the floors of the basement; the decay of the galleries from wet; the want of paint in many places; the bad condition of the drainage; the leakage of the roof; and in some other respects, that they were compelled to provide for these demands at once. The general strength and condition of the Hospital are quite satisfactory, but it is manifest that so many small defects in different parts of the building would very shortly have damaged the whole structure.

The trustees have arranged for the usual yearly supplies of provisions, groceries and other necessaries, at prices procured by tender.

The trustees also consulted with many of the leading professional gentlemen of the city, as to the best and most economical method of conducting the hospital. These gentlemen have, with great kindness, afforded us every information for our guidance.

From these communications and suggestions, the trustees are of opinion there should be, as heretofore, one experienced medical man, permanently

engaged as resident physician; a matron, to have charge of the servants and nurses, and to carry out the directions of the house physician; a steward, to procure, take charge of, and distribute the supplies; and a proper staff of respectable women for nurses, to be well paid for their constant and trying services.

The hospital, when open, will be visited daily at a stated hour by one or more of the medical staff who are placed in charge; and by at least one of the trustees.

No incurable cases should be received or retained in the hospital, for it is strictly a curative establishment. If necessary, another building, and perhaps under a special management, and of course supported by a distinct fund, should be procured as an asylum for that class.

There should be an isolated building for the treatment of small-pox and other contagious complaints, under the care of servants and others, who should not, while engaged there, have any communication with the general hospital.

The trustees have much to do, and but little to do it all with, for the sum of $3,825.38, will not go far, after paying salaries and wages, in doing much for the sick. It will be necessary to provide, in the first place, for those serious infectious diseases, which are rarely quite extinct in large towns; and secondly for cases of severe illness or injury among the destitute; and thirdly, for cases of general sickness, so far as the funds will extend; but the hospital, except in this limited manner, cannot, we fear, be made more serviceable during this year, under present circumstances.

The trustees regret to make this representation, but it is due to the public to be informed precisely how their charities are administered.

It is a reproach that such an establishment, with ample accommodation, in which all classes are interested, cannot be maintained in such a country, for the want of a few thousand dollars. The conclusion is forced upon us that there is something radically wrong in the present system of hospital management, and that a different scheme must be provided for their future maintenance. The sick, as a class, are entitled to quite as much consideration as the insane or the deaf and dumb, and it is very plain that if it be worth while to educate people at an enormous public cost, it is worth while to take care of them when they are educated and are struck down by sickness. It is a duty which we owe to the community not to suffer dangerous infectious diseases to remain among the healthy: their removal and treatment should, in most cases, be at the public expense. The basis of such a system must be public support, continuing regular, always ready for the emergency, and bearing equally upon all: not private alms, inconstant or irregular, too late for the occasion, and

pressing too heavily on the liberal, while many who are as able to give go free.

The present method of yearly legislative grants is not quite satisfactory. Some permanent self-working plan might be devised, to be corrected or amended by legislation, when necessary.

The only way to provide efficiently for such establishments will, it is believed, be found to be by a public tax, the most beneficial and benevolent purpose for which a tax can be raised. No one will begrudge it, so long as all are made to contribute, because all will share in its benefits. The poor or friendless, by hospital care, and the wealthy by the removal from their neighbourhood of those who are afflicted with contagious complaints, or by taking the benefit of hospital treatment in any case, which can be better attended to at a such place. The probable cost of such a system may be ascertained pretty nearly from the statistical returns made to Parliament. Some of these details are here stated—the general expenditures of the hospital for the year 1866, was as follows :—

| | Expenditure. | Number of Pat'nts. | Aggreg'te No. of Days in Hospital. | Cost per day. | Annual cost of each patient. | No. of outdoor pat'nts. |
|---|---|---|---|---|---|---|
| Toronto General Hospital.... | $16,663 00 | 595 | 33,854 | $0 50 | $28 00 | 3,902 |
| Kingston General Hospital... | 6,024 00 | 567 | 17,701 | 0 34 | 10 12 | 883 |
| Hamilton General Hospital.. | 6,635 00 | 506 | 27,155 | 0 24 | 13 00 | 158 |
| London General Hospital.... | 6,750 00 | 205 | 5,386 | 1 06 | 33 00 | 818 |
| Ottawa General Hospital..... | 2,000 00 | 100 | 3,237 | 0 62 | 20 00 | |
| Hotel Dieu, Hospital and Orphanage and Asylum, Kingston. (The above is the Hospital Branch),..... | | | | | | |
| The Orphanage Branch shews | | 218 | 3,729 | | | |
| The general expenditure of the two is..... | 2,049 00 | 48 | 11,750 | 0 13 | 8 00 | |
| Sisters of Charity, Ottawa.... | 5,292 00 | 247 | 6,392 | 0 83 | 26 00 | 320 |
| Lying-in-Hospital, Toronto.. | 1,156 00 | 88 | 2,548 | 0 45 | 13 14 | |
| | $46,569 00 | | | | | |

The general expenditure of the hospitals being..... $46,569 00
The following deduction should be made from it, for private income, receipts from paying patients and other small resources, amounting to about, say..... 18,569 00

Leaving the sum of about..... $28,000 00

to be raised annually for the sick, on the present very limited and insufficient scale, without including any extraordinary charge which must be provided for at times, such as bedding and furniture for the hospital here, which had to be procured in 1866, which cost $5,782, but which were paid for from a fund of $6,988.28 raised by our citizens to meet a most pressing necessity.

It may, perhaps, be that as much as $50,000 should be raised annually to afford the proper quantum of relief that is required and that should be given.

To raise this sum on the assessed value of the real and personal property of the province, which was in 1866, $264,496,744, will take about the fifty-third part of a cent in the dollar.

To give effect to a well arranged hospital system, these establishments should be set free from debt, which would require for Toronto...$58,000
For Hamilton.....5,000
And for the Sisters of Charity at Ottawa, if it be a public general hospital.....2,000

$65,000

In all, this would permit the whole private resources of these charities to be used for the purposes of their creation. That this might be done with advantage will appear from the following statement of assets of this hospital:—

The value of the hospital building, adapted for 300 patients, $95,000
Furniture, cost $7,000, value, say,.....4,500
Yearly income of $5,181 98, capitalized.....86,366
Property on hand to be leased, probable rental will be $14,000 per annum capitalized.....23,333

209,199
Debenture debt.....58,000

Surplus of assets over all charges.....$151,199

If a different arrangement be made for the support of hospitals, so that hereafter they may be sustained by a rate to be levied annually, the question will be, what shall be done with the present debt? Shall it be paid off by an immediate sale of property, or shall the property be retained and the debts be discharged from the tax to be raised? The way to determine this is to ascertain which course will be the most beneficial to the hospital, or, what is the same thing, to the country, for what is to the interest of the one must be to the interest of the other.

If the hospital be supported, it is not of the least consequence to the

trustees from what fund the support comes. The property which they hold now it is of very little consequence whether it is in their name or in the name of the crown: it is in either case public property, and must be dealt with and accounted for as such by whatever body or functionary it may be held.

If the property be worth what its present estimate represents, and if there be no prospect of a further increase to it, it will be better to sell off as much of it as may be necessary, and pay the debt at once: but if it be likely to raise in value, and to bring an increased rent at the expiration of the present leases which are all at valuation rents, then, as these leases will mostly fall in the course of about seven years, and such a term is a short time in the lifetime of a corporation, it will be better to relieve the property and to receive the income when it arises.

That the current rent will be improved very much by the future valuations to be made, no one can doubt, when the present low rentals and the favourable situation of the properties are considered. Under these circumstances it is manifestly better to preserve the property than to sell it; but the trustees speak in no selfish spirit in saying so. They will be equally satisfied whichever course may be adopted; they are only anxious that the wisest decision shall be come to.

The assessment before mentioned for hospitals might be raised over the whole province, and be distributed among them according to the number of patients they maintained, and the extent of service they respectively rendered; or a certain area might be assigned to the support of a particular hospital, and be taxed for that hospital only. The only objection to this latter plan is, that some one or more of the hospitals would be resorted to from the reputation of the medical faculty attending them, by persons not residents of the area which supported them, and it would, therefore, not be fair that any such locality should, at its own expense, be obliged to provide for the sick of another locality without any kind of compensation.

At the present time it is notorious that what is called the Toronto Hospital, and which is therefore supposed to be the hospital of Toronto, is not the hospital for this place, but is the receptacle for the sick poor from all parts of the country, who flock to it because there is no such place for them in their own localities, and this is no doubt the case with the Kingston and the other hospitals before mentioned. It would be better to declare them to be, what already they practically are, public general hospitals, and to provide for them accordingly. The incidental advantages of hospital practice, and of what is called "walking the hospital," are not

to be lost sight of in the consideration of this subject, for unquestionably the practitioner becomes more experienced, and the students better instructed in their profession by the variety of ailments exhibited and the convenient gathering together of them in one place for treatment. The skill and knowledge so obtained re-act for the general good, for the medical man who becomes more expert, or more scientific, becomes better qualified to serve the public. This kind of institution is an essential part of a student's education, and many of them, since the closing of our hospital, have been obliged to go elsewhere in search of that teaching which they cannot acquire here.

Municipalities which raised by voluntary assessment the magnificent sum of $676,740, and which paid nearly as much more in other ways for education alone in 1866, should not, and, it is believed, would not, object to contribute the comparatively small sum that would be required for the maintenance, and even, if necessary, for the erection of hospitals for the care and cure of the sick whom we have with us always. But we are bound to act from duty, and not merely from benevolent impulse, and our duty to the sick is contained in that sublime saying and in the passage connected with it, "I was sick and ye visited me," a saying which every one should remember, but especially those among us who have assumed the responsibility of ministering to this class.

The trustees have fully stated the situation of the Toronto hospital, and they have shown the inadequacy of their means to maintain it as it should be; they have also respectfully suggested their views for remodelling the hospitals of the province, because that which it is conceived is necessary for this hospital, it is probably just as expedient should be extended to all the other hospitals.

The trustees will do all they can with the funds at their command, in carrying out the trust reposed in them, but they would consider it a calamity if, after opening the hospital, they should have to close it again, and as there is a risk of this happening in consequence of the refusal of the Dominion Legislature to grant the $5,600 which was justly due to the hospital, and had been counted on, the trustees will be glad to be informed whether the government will be able or disposed to aid this charity in the present year to the extent of about $5,600, in case it may become necessary for the trustees to make the request.

The trustees sincerely hope this may be the last year that such an establishment will have to appeal for relief in this manner, and that all the hospitals of the province may be ranked hereafter among those public charities which it is considered to be an honour as well as a duty to maintain.

(Signed,) ADAM WILSON, Chairman T. G. H.

Toronto, 8th June, 1868.

## TRIENNIAL MEETING OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF LOWER CANADA.

The Triennial Meeting of the College of Physicians and Surgeons of Lower Canada, was held in the Court House, at the town of Three Rivers, on Wednesday, the 9th July instant, in conformity with a resolution passed at the last Triennial Meeting. There were present Drs. Chamberlin, Brigham, Peltier, R. H. Russell, Jackson, Tessier, H. Blanchet, J. B. Blanchet, Marsden, Rousseau, Belleau, Bardy, Lindsay, Robillard, G. E. Fenwick, Howard, Hingston, Trudel, O'Leary, Rottot, Scott, Hamilton, Badeau, Ross, A. G. Fenwick, Giroux, Landry, and Fleury. The President of the College, Dr. Chamberlin, took the chair at 10 a.m., and called the meeting to order.

Dr. Peltier, the Secretary for the District of Montreal, read the minutes of the last Triennial Meeting, which were duly approved.

Dr. R. H. Russell, Secretary for the District of Quebec, read a report of the proceedings of the College during the past three years, which was unanimously adopted.

Drs. J. B. Blanchet, Lindsay, McFarlane and Fleury, were severally proposed as Members of the College. Having completed the probationary period of four years as Licentiates, the ballot having passed, they were declared duly elected.

The following motion, notice of which had, in accordance with the by-laws, been submitted at a former meeting, and duly published, came up for discussion.

Drs. Marsden and Howard hereby give notice that they will, at the next Triennial Meeting of the College of Physicians and Surgeons of Lower Canada, move "that the by-law be altered and amended by substituting the following for the third section of the regulations" having reference to the preliminary examination of candidates.

"At the preliminary examination the candidate must furnish proof of his possessing a good moral character and a competent knowledge of the Latin, Greek, French and English languages, History, Geography, Mathematics and Natural Philosophy."

Dr. Marsden said that, with the consent of the seconder, he would beg leave to withdraw this motion, inasmuch as this subject would come up for discussion before the Canadian Medical Association in September next.—Granted.

The following notice of motion, which had been published in due form, was then submitted to the meeting:

Moved by Dr. G. E. Fenwick, and seconded by Dr. R. P. Howard, That inasmuch as there are persons holding the license of this College,

who have acted, and continue to act in a disgraceful manner in a professional respect, that this College shall seek to obtain from the Legislalature such amendment to their Act of Incorporation as shall entitle them to remove from their Register the name of any such offender, and that the removal of the name of any Licentiate from the Register of the College, shall by law, deprive said individual of all the rights and privileges granted by such License.—Carried.

Moved by Dr. Marsden, seconded by Dr. Brigham :

That whereas, the law as it exists in the Province of Quebec in relation to persons practising Physic, Surgery, or Midwifery, without license, is almost inoperative, it being next to impossible to obtain "two witnesses" to establish any one given fact; inasmuch as the professional services rendered are for the most part of a personal and private nature, and do not always admit of a witness; it is therefore expedient and necessary to amend the law in this behoof. And, whereas, the habit has long prevailed among the members of the Medical Profession of rendering accounts for professional services, and especially for family practice, once only in each year, the law which permits Medical men in such cases to make personal proof of services rendered within a year and a day, has consequently become almost a dead letter; it is therefore expedient and desirable to amend the law, so as to extend the privilege to two years instead of one. Be it therefore

*Resolved:* That the mover and seconder, with Drs. J. J. Ross, Theo. Robitaille and Church, be named a Committee to bring these matters under the consideration of the Legislature, and to take the necessary steps to obtain the amendments suggested by this College.—Carried.

Moved by Drs. Smallwood and Gilbert, that at the next triennial meeting of this College they will submit for adoption : That the clause in the act, in reference to Students presenting for examination, as on page 12 clause 5 of the printed regulations, that all after the words *twenty-one years* be repealed, and that the following be substituted, and that he be indentured by a notarial deed to a duly Licensed Practitioner for the space of four years, and that during the last three years, the said Practitioner shall allow the said Student to attend the necessary lectures, demonstrations, Hospital and dispensary practice, necessary to present himself for an examination for the obtaining a Diploma or License, and that the same be published in the Canada Medical Journal, as required by the regulations of this College.

Neither the mover nor seconder of this being present, Dr. Scott presented a letter which he had received from Dr. Smallwood, requesting permission to withdraw this motion, which was granted.

Drs. Marsden and Smallwood gave notice of their intention to move at the next triennial meeting of this College for an amendment of the by-law of the College, now in force, by erasing the following words under the head of fees, Parchment $5.—Carried.

The meeting then proceeded to the election by ballot of thirty-six governors to constitute the Board of the College for the ensuing three years.

Proxies were handed in from the following gentlemen, Drs. Bibaud, G. W. Campbell, F. W. Campbell, Codere, Beaubien, Craik, Fraser, Smallwood, McCallum, Taylor, Munro, Picault, Sutherland, Drake, Duchesneau, Gibson, Church, Tassé, Wilbrenner, Wolff, Sewell, J. P. Russell, Lemieu, O. Robitaille, J. E. J. Landry, Von Iffland, Forrest, Michaud, Tetu, Worthington and Gilbert.

Drs. W. E. Scott, H. Blanchet, and A. G. Fenwick, were appointed to act as scrutineers. The ballot having been taken, the members adjourned to allow the scrutineers time to make their report. After re-assembling the following gentlemen were declared duly elected Governors for the ensuing three years.

*For the City of Montreal*—Drs. Peltier, Trudel, Rottot, Scott, Howard, G. E. Fenwick, Robillard, and Smallwood.

*For the District of Montreal*—Drs. Chamberlin, Tassé, Wilbrenner, Brigham, Duchesneau, Gibson, and Church.

*For the City of Quebec*—Drs. Sewell, J. E. J. Landry, Marsden, Tessier, R. H. Russell, H. Blanchet, Jackson, O. Robitaille.

*For the District of Quebec*—Drs. Theo. Robitaille, Tetu, Marmette, Michaud, Lavoie, Dube, and Boudreau.

*For the District of Three Rivers*—Drs. Ross, A. G. Fenwick, and Landry.

*For the District of St. Francis*—Drs. Hamilton, Gilbert, and Worthington.

A vote of thanks was then passed in favour of the retiring officers of the College for the interest and ability displayed by them in the management of its affairs, and it was resolved that the next triennial meeting of the College should be held at Three Rivers.

This closed the business of the meeting. At a subsequent meeting of the governors of the College, held the same day and at the same place, the following gentlemen were elected, by ballot, officers of the College for the ensuing three years.

*President*—J. E. J. Landry, M.D., Quebec.

*Vice Presidents*—A. T. Michaud, M.D., and Hector Peltier, M.D.

*Secretaries*—R. H. Russell, M.D., and J. P. Rottot, M.D.

*Registrar and Treasurer*—H. Blanchet, M.D. The Board then adjourned.

*Half yearly Compendium of Medical Science.* Edited by S. W. Butler, M.D., and D. G. Brinton, M.D.

We received the first number of the Compendium, and gave at the time an editorial notice of the work. The second number is in the press, and will appear during the course of this month. It has met deservedly with a cordial reception from the profession of the United States and Canada. It fills a void in American Medical Literature, as the selections are in a great measure taken from American Medical Periodicals. The foreign abstracts are content in selections from a few only of American journals, thus practically ignoring many of the best writers on this side of the Atlantic.

The Compendium contains about 300 royal octavo pages, printed on good paper and clear type. It is to be hoped that the profession will heartily support this undertaking. The subscription is $3 per annum, and each part will be found to contain the cream of American Medical Periodical Literature, together with liberal selections from foreign journals.

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In the early part of June last, amputation of the foot (Chopart) was performed at the Marine and Emigrant Hospital, Quebec, by Dr. Landry. The patient was brought under the anæsthetic influence of Protoxide of Nitrogen by Dr. Pourtier of that city. This is the first time, we believe, in Canada, that this agent has been used as an anæsthetic, during the performance of a major surgical operation.

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*Personal.*—We understand that Dr. Lizars, of Toronto, late of the *Toronto School of Medicine*, has been elected professor of Surgery and Surgical Anatomy in the *University of Philadelpia.*

Dr. Lizars, who, we believe, is a nephew of the distinguished Lizars of Edinburgh, ranks among the most skilful Surgeons of Canada.

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Dr. Canniff, who for several years was professor of General Pathology and Surgery in Victoria University, the Medical Department of which is in Toronto, has resumed the chair of Surgery.

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## TO CORRESPONDENTS.

We cannot publish any annonymous communications. A communication signed "A." is for this reason withheld.

Dr. Phillip, of Plattsville, Ont., has our thanks for his kind interest in

the Journal. His list of subscribers with enclosure came to hand in due course. Their subscriptions will commence with volume 5.

"A. B." Perth, Ont., is informed that good reliable vaccine matter can be had from either Kenneth Campbell & Co., Medical Hall, Montreal, or Ebenezer Muir, Place d'Armes, Montreal. The order must be accompanied by a remittance of $1.

Letters containing money are requested to be addressed to the publishers.

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ERRATA:—*At page* 329, Vol. 4. line 8 for "Society" read "*Institute;* line 10, for "American Association" read "American *Medical* Association."

*At page* 531, line 27, for "physiologist" read *philologist.*

Vol. 5, page 14, line 30, "but in spite of the evils of which we speak. We"—read—"but in spite of the evils of which we speak, we," &c.

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TORONTO OPHTHALMIC DISPENSARY:—A correspondent in Toronto informs us that the Ophthalmic Dispensary, which was started in that city in May, 1867, has proved a success. Its officers are, A. M. Roseburgh, M.D., Surgeon; R. A. Reive, B.A., M.D., Assistant-Surgeon; W. H. Cummings, M.D., Consulting-Surgeon. The Institution is conducted by a Board of Directors.

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## MEDICAL NEWS.

In the New York *Medical Gazette*, Dr. Bliss reports three cases of spermatorrhœa cured by the use of sounds dipped in iced water, and then introduced in the urethra. These happy results are referred by the Doctor to the sedative effect of the cold.

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### INCOMPATIBILITY OF POT. IODID. AND POTASS. CHLORAT.

This is an important point in practice, for in Syphilis, to act at the same time upon the ulceration of the mouth and the general malady, chlorat. potass. and pot. iodid. are frequently given. This practice is dangerous, as has been demonstrated by M. Vée; for the chlorate of potash, absorbed simultaneously with the iodide of potassium, may part with its oxygen, and transform it into the iodate, a poisonous agent. The recent experience of M. Melsens proves the possibility of this transformation.

This ought to suffice to prevent, were it only as a precautionary measure, the simultaneous administration of the chlorate of potash and the iodide of potassium.—*Gazette Med. de Paris.*

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*An Essay on the Contagion, Infection, Portability, and Communicability of the Asiatic Cholera in its relations to Quarantine; with a brief History of its Origin and Course in Canada, from* 1832. By W. MARSDEN, A.M., M.D., ex-President and Governor of the College of Physicians and Surgeons, Canada East; Honorary Fellow Medico-Botanical Society, London; Corresponding Fellow Medical Society, London; Honorary Fellow Montreal Pathological Society; Honorary Fellow Berkshire Medical Institute and Lyceum Natural History; Honorary Fellow Medico-Chirurgical Society, New York; Member by Invitation of the American Medical Association, &c., &c., &c.

On the 6th of July, 1849, John Wilson, the celebrated Scottish vocalist, who had before charmed the citizens by his chaste and classical rendering of the songs of the Border, arrived in Quebec from New York where cholera was prevalent, with the intention of giving a farewell concert, before returning to "Bonnie Scotland." On the 9th of July, the walls of the city were placarded over with huge posters, headed, "Wilson's last night." Little did his friends imagine how truly ominous were these words. At the moment that the *élite* of the city was gathering to attend his farewell performance, the doors of the concert hall were closed against them, and a notice on one of the entrances announced the fact that all that was mortal of John Wilson the vocalist, had passed away.

On the morning of the 8th July he went out on a fishing excursion to one of the beautiful lakes north of Quebec, but was soon compelled to return to town with diarrhœa. He sent for a physician, took to his bed, and died at one o'clock, a.m., on the 9th of July of well-marked Asiatic Cholera.

The circumstances connected with this case form a brief episode of themselves on the infectious character of Asiatic Cholera.

On the evening of the 6th of July, he met a party of about a dozen of ladies and gentlemen at the residence of one of the leading citizens of Quebec, George Okill Stuart, Esquire, Queen's Counsel, then Mayor of the city; and within one week from that day, four of the party including Mr. Wilson (and one of them the lady of a Baronet), were among the earliest victims of Asiatic Cholera.

Mr. Wilson died at the St. George's Hotel, on the *Place D'Armes*, kept by Willis Russell, also proprietor of the Russell Hotel, Palace Street. Being the family physician of Mr. Russell (although I did not attend Mr. Wilson), I strictly enjoined him to destroy or cause to be destroyed or buried all the body and bed-clothing of deceased, as well as the bed on which he died, and to have the rooms thoroughly disinfected.

The medical gentleman who attended Mr. Wilson, although a distinguished physician and surgeon, was a decided non-contagionist, and pooh! poohed! my suggestions. On Mr. Russell hesitating how to act, I told him that I should feel it my duty to warn any of my friends of the danger of visiting his hotel, if he refused to adopt the prudent precautions I had suggested. Having prevailed on him to follow my advice, the clothes and bedding were removed, and (as I then supposed) destroyed, and I superintended the thorough disinfection of the premises. There was no other case of cholera in the hotel.

Now for the sequel. A waiter named Francis Roberts, to whom the clothing had been given by Mr. Russell to be destroyed, fearing no danger, and thinking the clothes too good to throw away, took them to the gaol where he lodged with his son, who was one of the turnkeys, and hung them up in a large room, known as the chapel, to air. Here Sunday services were performed, and in the week days it was used by the turnkeys and their families as a general recreation room. On the following day, Roberts had an attack of cholera, but got better. On Tuesday, instead of remaining quiet at home, he went down to St. John Street to see a friend, a watchmaker and jeweller, named Teasdale, with whom he remained an hour or two. On his return to the gaol, he had a relapse, and died of cholera the same night. The next day Teasdale was attacked with cholera and died, and his wife also. The same day Miss Browning, a daughter of another of the turnkeys in the gaol, fell sick, and after a severe attack recovered. On the same day, the 13th, a prisoner named John Baker, who had been allowed to range about the corridors, and into the chapel, was attacked and died. On the Sunday following, Miss Mary Ann Browning, another daughter of the turnkey's, was attacked at eleven o'clock, a.m., while at the chapel, and was brought home, and died at ten the same night. After this, a number of cases occurred in the gaol.

I have now traced the fatal consequences of the cupidity of poor Roberts in preserving the clothing, and will relate the circumstances connected with the bedding, which is still more remarkable. Mr. Russell at first, doubting the soundness of my views on contagion, and seeing that the mattress on which Mr. Wilson died was a very large one, and perfectly new, (the hotel having just been re-opened and re-furnished for the season), ordered Barthelemie Blais (a jobbing upholsterer who worked for him), to carry the mattress down to the Russell hotel, Palace street, then unoccupied, and place it upon a promenade gallery on the roof of the building, which was done. There it remained for several weeks exposed to all weathers, when one day, cholera having nearly disappeared, Blais reminded Mr. Russell that the mattress was still out upon the roof, and proposed to pull it to pieces, to tease out the hair, wash and dry it, burn the tick, and make it up anew. Mr. Russell, who had forgotten the circumstance till reminded by Blais, ordered him to destroy it. Blais thereupon asked Mr. Russell if he would allow him to take it home and make it up for himself, as the cholera was over, and he had no fear of sickness; to which Mr. Russell replied, "Take it away and do what you like with it, but do not bring it back here." He took it home, and next day ripped open one end and commenced taking out the hair. This was about nine o'clock, a.m. He sickened before he had been ten minutes at work, and died in a few hours, and was buried the same night, leaving the mattress just opened as I have described, and as it was shown to me by his widow the next day before it was finally destroyed.

Another striking case of infection from clothing occurred this year, which was related to me by the Health Officer.

A French Canadian was employed by the Board of Health to destroy cholera clothing, bedding, &c., and was engaged in destroying and disinfecting at the house of one Maingui, where twenty-three deaths had occurred. Whilst so employed, he found a coat apparently new or nearly so, and thought it too good to destroy. He tried it on, found it fitted him, kept it on, and went home with it. He sickened that night, and died the next day of cholera. Mr. Baker, my informant, the active and intelligent Deputy Health Officer, assured me that cholera had not in any solitary case broken out a second time in any house in which the process of disinfection had been carried out by the Board of Health since 1849.

A precisely similar case occurred in a poor man, who had been a sort of pensioner on the bounty of Mr. Blumhart, a well-known citizen of Quebec, who died of Asiatic Cholera. At his death the suit of clothes he wore when he was attacked, were given to this man. Proud of the

gift of a superb suit of clothes, he put them on for the first and last time, on the following Sunday morning, and went to mass. After service he returned home, was attacked with cholera and died the same night.

On the 23rd of July, Mr. John Howison, a well-known citizen, died in St. John suburbs of Asiatic Cholera. Mr. John Codville and Mr. Lortie, two of his friends, visited him during his illness and remained a while with him. Lortie attended Howison's funeral that evening, and next morning was a corpse. Mr. Codville died during the same day. On the morning of Lortie's death, of which I had just been informed, I was passing his door, and saw a mattress and a quantity of his clothing on the boards near an open window, and a number of children, eight or nine, rolling and tumbling among the clothing. Finding that it was bedding and clothing that had been about the person of the deceased, I ordered the children away from the place, warning them of their danger, besides notifying their parents. Of these poor unsuspecting little ones so lately full of life and glee, five died of cholera within thirty hours.

A nearly similar occurrence took place in another part of Quebec. In the rear of Clapham Terrace, a fashionable part of the city, a Mrs. O'Connor died of cholera. Her straw bed, bedding and clothing were thrown into an adjoining open piece of unoccupied ground. A number of poor children in the neighbourhood were seen rolling among the bedding. A lady patient of mine who lived in one of the houses on the terrace, and knew my ideas on the infectious character of cholera clothing, made it her business to watch and investigate the facts, and reported that four of the poor children who were known to have gambolled among the infected clothing, died of cholera. These are assuredly strong cases of the infection from cholera clothing.

Having now tracked the disease through three invasions, we come to the fourth, which occurred in 1851. There I saw and attended the first case that appeared. It was in the person of a gentleman from the United States, of German extraction, who with his friend was attacked with Asiatic Cholera, at Sword's hotel, St. Lewis Street, and died. The place was thoroughly disinfected by the active and efficient Health Officer, Mr. R. Symes, and no other case occurred there during the season. The next case strongly favours the doctrine of contagion. One of the waiters of the hotel who waited on the gentleman above mentioned, was sent to Mr. Drum's cabinet warehouse, to order a coffin, &c. As his wife lived in a small bye-street called "Ancien Chantier," on his way to the cabinet maker's, he called in to see her. She was the next victim and the first case of cholera known or reported among the citizens, and she died two days after the gentleman at the hotel. There was no other case

of cholera then in that locality, nor had there been any other previously.

Fearful of being tedious, and having shown the origin of cholera in 1851, I will proceed at once to describe the invasion of 1852. Down to this time each successive attack in Quebec had been less extensive and fatal than the previous one. In round numbers, the deaths from Asiatic Cholera were nearly as possible as follows:

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|---|---|
| In 1832 | 3,450 |
| " 1834 | 2,500 |
| " 1849 | 1,180 |
| " 1851 | 280 |
| " 1852 | 145 |

The first case in 1852 occurred on the 25th of September, in a man named McKnight, who had been working on board the American ship "Advance," of and from New York, which vessel had had a death from cholera on board, on the voyage to Quebec. The disease communicated rapidly to six other persons, who lived in the same lodging-house, in Champlain Street, with Mr. McKnight, and among them were two sailors who belonged to the "Advance." Of these seven cases, five died. The last case in 1852 occurred on the 9th of November, being about six weeks from the commencement of the outbreak. The comparatively small number of cholera cases this year may be attributed to the fact that the first case occurred late in the season, when the weather was becoming cold, and there was little or no emigrant or transient population in the city.

We now come to a most interesting and important period in the history of Asiatic Cholera in Canada in 1854. When the disease reappeared as in 1832, 1834 and 1852, it again laughed at Quarantine Laws, and for the same reasons: viz. "The utter inefficiency of the system adopted." A repetition of the events of previous years took place. A few days after the arrival of a vessel at the Quarantine Station at Grosse Isle with cholera on board, the disease appeared in the city, and soon travelled all over the country.

*(To be continued.)*

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*Principal causes of the Mortality of Montreal, and Modes of Prevention.*

By William H. Mondelet, M.D., Licentiate of the College of Physicians and Surgeons, C. E.

STREET CLEANING.

The duties of this highly important branch of the Hygienic department are but imperfectly performed. The system employed for its accomplishment is liable to become itself a source of nuisance.

No department of the city administration is more seriously defective, or calls with a louder voice for reform. Our streets are, in many places, throughout the city, at different seasons of the year, intolerable nuisances. Among the causes of an increased mortality, they undoubtedly play an active part.

If the health of the city is to be maintained, the streets must be kept clean and preserved from the accumulation of offal. It is the decomposing and disgusting refuse from houses and yards that loads the atmosphere with the poisonous elements of disease. In our frequented thoroughfares, in our narrow streets, where an overcrowded and less cleanly population reside, it acts with tenfold power. The practice of emptying pails of dirty water into the street is carried to a great extent in certain parts of this city. Such a practice should not be tolerated. It has been well observed that the streets are the reservoirs whence we are supplied with fresh air, and if the air is impure in them, it is impure everywhere; consequently, that which should at all times be a benefaction and an appliance for health, is oftentimes an intolerable agent of mischief. Pure air is essential to health, and just in proportion as our streets are kept clean, so will the purity of the atmosphere be promoted. Observation and experience have abundantly shown that the health of the population is always in proportion to the purity of the atmosphere. It requires no further argument to prove the necessity and value of ample provision, and this provision vigorously applied for keeping our streets clean.

It is one of the finest public essentials for the preservation of the health of the city. Let the authorities look carefully to this department, which has been so unfaithfully carried out, or so shamefully neglected. It may be, that the existing ordinance in street cleaning is sufficient for every emergency, and that the failure is in the manner of carrying it out. Various propositions have been made for an improved plan in carrying out this cleaning. That more frequent cleaning by the brush, scraper, and a freer application of water, are necessary, does not admit of a doubt.

Having the work on our principal streets and thoroughfares performed by night, or in the morning, before sunrise, seems to be practicable, and would be highly advantageous, especially to the business community. The Paris system, which is considered a thorough one, is confided to the mayor and his police. The work is done early in the day, by contract. The citizens are taxed separately, for the cleaning done before their own doors, at a cost of about two dollars *per annum*, the police being held responsible for collecting the tax, and having the work perfectly performed.

It is exceedingly important that measures be taken to secure the regular cleaning of the more obscure and narrower streets, in those densely populated neighbourhoods where, during the past years, it has been shamefully neglected, and where it is more necessary, as a sanitary appliance, than in the wider and more central thoroughfares. The gathering of street dirt into heaps, along our highways, and retaining it there for hours, fermenting under a temperature of 75° and upwards, and exhaling offensive and pestiferous gases, constitutes a nuisance prejudicial to public health, and in connection with the accumulation of filth in many neglected streets and lanes, which is alike unhealthy, is a cause of complaint made almost daily during the summer months. Under proper management by the supervisors or contractors, there is no reason why these nuisances should occur. Similar accumulations may often be found piled up near the inlets to the sewers, after cleaning out the lumps. The only remedy, for the impediments, is to require the supervisor to remove the *débris* simultaneously with its being gathered into heaps. An ordinance to this effect, should be rigidly enforced.

The proper disposal of street dirt is another sanitary evil that deserves impartial consideration.

As a fertilizer street dirt is invaluable, and would compensate the corporation, if they had the control of it, in establishing a dumping ground beyond the city limits, where it could be deposited, and disposed of at fair prices. The present system adopted by some contractors, of occupying wharves for a place of deposit, and allowing the dirt to accumulate for a number of weeks, in hot weather, has become of late a frequent cause of complaint, and is liable to create a nuisance prejudicial to health, by loading the atmosphere with offensive exhalations. The docks along the river, in front of our city, are the spaces formed for the use of shipping. While these offer a desirable accommodation for our commerce, and constitute an economical arrangement for the loading and unloading of vessels, those a little below the city are the most perfect receptacles for sewer refuse, for every description of river filth that floats backwards and forwards with the current, also depots for dead animals and human excretions. From our earliest history they have been arraigned as a fruitful cause for the spread of epidemics, which have from time to time ravaged our city. People have complained of them, declaring them to be nuisances prejudicial to public health, and recommend general cleaning; and still they exist with all their impurities, sending forth their *miasma*, inviting disease in its most malignant forms, as painful experience, during more than one fatal epidemic, has proved.

The unhealthy condition of these polluted and stinking docks is no imaginary nuisance in the mind of the corporation. They are disgusting evils, revolting *reservoirs* of mud and filth, sure causes for an insalubrious atmosphere, and an active agent for the spread of pestilential diseases. Another part of the city which should call the attention of the city authorities is the swampy part of upper St. Denis, although, from what I since hear, great pains have been taken to drain off the water.

### WATER SUPPLY.

It would appear almost superfluous for me to utter a word on behalf of the vital importance of an abundant supply of water as a sanitary agent, and as a preservative of health. The plentiful supply of pure water is a matter of the utmost consequence to the inhabitants of a large city.

Among the complicated arrangements of civilization, few are of higher importance than those which relate to the command of water. Whether for dietetic or domestic purposes, for the bath, or for carrying away the corrupting refuse of our towns and cities, a liberal supply of good and wholesome water is an indispensable requisite. Admitting the necessity, I intend in the following pages to give some account of the water works, baths and other sanitary provisions, adopted in reference to the supply of water in ancient and modern times, dwelling on what seems more especially applicable to the wants of our populous localities.

Water, as explained under chemistry, is a compound of Hydrogen and Oxygen, and is, when pure and under the ordinary temperature of the atmosphere, a transparent liquid, without taste, colour or smell. In nature, however, it is never found in a state of purity. In the ocean, it is salty and brackish, from the presence chiefly of chloride of sodium; in springs it is either carbonated, that is, it contains carbonates, or sulphates, from the presence of sulphuretted hydrogen, chalybeate, from the union of the sulphate or carbonate of iron, and so on, according to the nature of the mineral ingredients through which it percolates. When it holds in solution a chemical compound, it is said to be hard.

The impurity of water may thus arise either from chemical union, or other mechanical mixtures, with other bodies. The latter can generally be removed by filtration; but when the union is chemical, distillation is necessary to produce a pure liquid. Under the ordinary pressure of the air it absorbs carbonic acid gas, and to the presence of this gas, our ordinary spring waters owe their agreeable flavour.

Fresh water, as distinguished from that of the ocean, is attained from rain, springs, rivers, lakes, or wells, and is characterised by peculiar properties, according as it is obtained from one or other of these sources,

Rain water, if collected on mountain districts, and far from dwelling-houses, is perhaps the purest of all; but if collected in the neighbourhood of towns, it is found to be largely impregnated with soot and other extraneous substances, and the rapidity with which it decomposes, demonstrates the presence likewise of organic matter. Being soft, it is valued by the housewife for washing, but is unfit for internal or culinary purposes, without undergoing rigid filtration. Unimpregnated with mineral substances, its action on lead is more rapid than that of other substances, and it should therefore never be kept in leaden vessels.

River water, which is a combination of rain and spring waters, is often well fitted for general purposes. Its impurities are more of a mechanical than of a chemical kind, and may be removed by careful filtration. Much, however, depends on the soil and district through which the river flows, meadows and forests yielding organic matter, and factories and towns regulating heterogeneous impurities, not to be got rid of by any ordinary process. Water drawn from fresh lakes is less turbid than that from rivers, but is always largely impregnated with vegetable or animal matter. Well or pump water is attained either by boring or sinking shafts into the rocky *strata*. It must of necessity, like spring water, partake more or less of the mineral ingredients through which it percolates, and not unfrequently is injured by the pumps, pipes and other apparatus by which it is raised. Reservoirs or tanks are necessary appendages to most water works, and require to be constructed with skill and care. Occasionally they are little more than simple excavations, the excavated earth forming the retaining banks; but they are generally lined with masonry, and if very deep, the embankments should be very strongly constructed, as serious accidents may arise from their breaking down under pressure of the water. As the pressure of any given amount of liquid can be calculated with precision, there is no excuse for the engineer who blunders, either as to the proper slope or weight of a retaining embankment. Constant supply or high pressure is obtained by having the source from which the supply is attained, at a considerable height above the town, so that, by the force of gravitation, the water may be delivered at the highest house, or, failing this, steam power must be applied to raise it to reservoirs at such a height, or to force it at once into the pipes.

Large reservoirs should be furnished with water outlets, to prevent damage in case of freshets or land floods.

As I have already stated, waters are more or less contaminated with chemical or mechanical impurities. To get rid of the former, there is no cheap available process on a large scale, and therefore if they prevail

to such an extent as to render the water unfit for ordinary use, the water must simply be avoided. In the laboratory, the chemist can, no doubt, readily effect a separation of these impurities; not so in the large supply necessary for a town's consumption, though several ingenious methods have from time to time been proposed. Mechanical impurities, on the other hand, as sand, mud, and the like, can be rapidly got rid of by filtering, and that the more perfect the slower the process. Passing water through layers of sand and gravel, is one of the simplest methods. To these are added potsherds and charcoal, the latter destroying all *feta* and putrefaction. The manner of distributing water in towns, by the ordinary main and service pipes, may be either intermittent or constant. The intermittent or periodical system consists in laying on the water, as it is termed, at regular or irregular intervals—once a day or once in two days, as the case may be. Of course, in the interval, no water can be drawn from the service pipes in the interior of houses, so that means must be adopted for storing away a sufficiency for domestic requirements during the time the supply is withdrawn.

Montreal city is supplied with water by the water-works, which pump up the water to the reservoir at the foot of the mountain, whence it is distributed to every house in the city. But is the supply sufficient? No! At times, to repair a small branch pipe, a part of the city is deprived of that useful agent. The fact is well known that the present capacity of the water supply is inadequate to the demand. At certain seasons of the year, too, when its use is most required and most essential for general and personal cleanliness, its deficiency is sometimes alarming, and this scarcity furnishes a just cause of complaint.

The free use of water by the citizens, as a preservative of health, demands an increased supply adequate to the wants of the consumer. During the warm months there should be an abundant supply for all purposes. For the general health of the population it is required. For sanitary measures, as washing the gutters, flushing the inlets, there ought to be a sufficiency to allow every plug in the built-up sections of the city to be started for half an hour every day, under the direction of the police. The existence of a considerable waste in the use and application of water, calls for rigorous municipal supervision. Nor is this heedless waste without a serious inconvenience to these localities where the surface drainage is imperfect. The inundation of the streets and gutters, and the filtration of moisture into the subsoil, must become a cause of disease.

The nuisance occasioned by the frequent and indiscriminate flooding of pavements with water from hoses, should be condemned. The washing of pavements should be placed under specific police regulations,

in order to prevent what is certainly a sanitary benefit from becoming a sanitary evil. I would therefore urge that steps be taken for the correction of this public grievance. The inadequacy of the present system of water supply has been referred to the engineer of the water department. The necessity for more extended mechanical or other arrangements to meet the supply that the steady growth of our city suggests, is a subject that should arrest the early attention of the Corporation. Interested as I am in all questions of sanitary improvement, I cannot refrain from urging upon the city authorities the wisdom of inviting suitable investigations of systems and plans for further improvement.

Moreover, impure water used as a drink is a common cause of disease. River or pump water near towns often contains decaying vegetable matter, and even animal, inducing cholera and typhoid symptoms. Hard waters which are impregnated with some of the salts of lime, render the bowels costive, and are supposed to favour the production of calculous deposit, may induce dyspepsia and diarrhœa: waters containing iron are constipating and heating. Any kind of impure water if being used as drink, may gradually affect the processes of digestion, nutrition and assimilation (Williams' principles). The epithet mineral is applied to all waters which contain a sufficient quantity of foreign matter in solution to affect the taste or smell, or which differ from the common spring or river water of the country in which they occur by a difference in their temperature. Heat, being one of the most remarkable circumstances by which spring water is distinguished from another, attracted the attention of men, and accordingly it is to hot spring waters that we find the earliest allusion in ancient writers.

## VENTILATION.

This important measure, highly important to the conduction of public hygiene and health-preserving mode of the population of Montreal, should also receive the attention of the Board of Health.

Air, confined within a limited space, is generally subject to the operation of causes which affect its salubrity in various ways. The exclusion of oxygen, one of the most important gases for the maintenance of life, becomes apparent. In its place, carbonic acid is formed. The effluvia from living bodies, and especially those labouring under disease, are capable, if continued, of originating various affections, and, if a due amount of purified air is not admitted, are capable of propagating numerous malignant diseases. One of the most potent causes of disease is deficient ventilation. This is especially true of northern latitudes, where the rigour of the climate, for a great part of the year, enforces

defensive measures against cold, and calls for a large supply of artificial heat.

In Canada, for six long months every year, we are held weather bound, and compelled to throw ourselves at the feet of the black *hyperborean Juggernaut*, the stove. How many rise from their devotions in the spring, with pale faces and sunken chests, which it takes all the summer to restore to normality! how many only rise to fall a prey to that insidious and inexorable death, consumption!

Every spring there is new activity among sanitary commissions; they have been specially active of late years, when the approach of the great scourge of cholera has been proclaimed on all sides of us. This activity is often only of the tongue, but still there is agitation and cries of "beware," and people, as in the presence of death, take heed for a while, and try and keep their houses and bodies in order. If, after a while, the cholera does not come, there is a relapse and an amnesty of dirt and bad diet. The summer passes, and winter draws nigh, and sanitary commissioners grow dull and lay in their firewood. They do not consider that, with our glorious out-door atmosphere, thousands of men, women and children are poisoned every winter, all through contempt of the greatest of the luxuries that God gives to his creatures. It is a fact that lectures on hygiene, moral, mental and bodily, sermons, temperance addresses, "feasts of reason," discourses on gymnastics and muscular development, are furnished (every winter) to crowded audiences, who all the time they are drinking in instruction, are drinking also in one of the most deadly poisons. Many a time have we denied ourselves the pleasure of being present at some public entertainment, because we did not relish the idea of breathing the air that had passed through the lungs, some of them less or more diseased, of some hundreds or thousands of people. All the science or learning in the world will not keep us from closing our nostrils against the admission of impure air when we can obtain it unadulterated. In saying this, we consider ourselves representative of a few. Only a few, we believe, for it is wonderful how many men, some of them doctors in medicine, fail to realize the deadly effects of the air that is breathed for, at least, two-thirds of the winter, by a vast majority of our population. With all the benefits of advancing civilization, we seem, in this respect, to be considerably in rear of the heaven-inspired wisdom of the savage.

We admit a deadly foe into our houses, our halls, our churches; sit with him, feast with him, sleep with him, laugh with him, treat him as a friend, or at any rate a harmless acquaintance. This foe is vitiated air. People are constantly "catching cold" during the winter months,

and it is his "evil communications" that cause the apprehension of that thief of all mundane comfort. Over heated rooms, with air-tight windows, apparently constructed for the rehearsal of the "black hole tragedy;" churches where the breath of life is considered too good a thing for sinful lungs; public halls, the very thought of which, on festal occasions, is disgusting; factories and schools, and workshops, in which the confined inmates lose all vital energy,—it would seem almost unnecessary to bring these under the notice of sanitary commissioners. And yet we are convinced that these rooms, and churches, and factories, and halls, and school-buildings thus ventilated, are literally hot-houses of disease, not only of body but of mind. An ordinary man requires from seven to ten cubic feet of pure air every minute; and this supply again is as necessary to health as wholesome and sufficient food. It would be easily shewn by statistics, how far short of this quantity it is the lot of most people to obtain, and yet it is quite possible for every house to be ventilated, and so as to have its warmth procured, that it should not interfere with the proper supply of pure, fresh air. In some localities, of course, the outside air is affected with nuisances of various kinds; but a proper sanitary oversight, and the due enforcement of hygienic regulations, would soon clear the atmosphere of pestiferous taints. It is the duty of municipal authorities to attend to these matters. The attention they receive in Montreal is very limited. But the internal evil, that which, we believe, adds more fearfully than any other to our returns of mortality, it is the duty of every proprietor, and householder, and church warden, and school commissioner, and employer, to consider and to remedy. The Inspector General of Military Schools in England, who has given this subject considerable attention, makes the following remarks on a system of ventilation which is generally considered harmless. "It is highly objectionable to admit any great quantity of cold air by ventilators at the baseboard of the room. I have had on many occasions to close them up, as I have found coughs, sore throats, and sore eyes, traceable to them."

(*To be continued.*)

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*Case of Obstinate Constipation, caused by Eating the Fruit of the Wild Raspberry.* By GEORGE J. POTTS, M.D., Surgeon, &c.

A boy, æt. seven years, son of Mr. MacDonald, residing in the township of Thurlow, Kingston Road, a few miles from Belleville, was observed by his parents to be suffering some pain, which they took to be

an attack of inflammation of the bowels, and resulted in my being summoned to the child on the morning of the 22nd July. On my arrival at the residence of Mr. MacDonald, I learned from the mother that the child had been unable to defecate for more than ten days, and, on further enquiry, elicited the fact, that he had not had any evacuation from the bowels for several days before his mother discovered the cause of the boy's suffering. She gave him a dose of castor oil as soon as possible after recognising the difficulty. The oil never operated. The child was observed to get thin (waste in flesh) day by day, but made no complaints of pain except when making attempts to defecate. The father was from home, and the mother being in very poor health, but little notice was taken of the child, especially as there were no complaints made. On examining the child, I was forcibly struck with his appearance: he looked like one in a state of starvation, free from pain and thirst, had no appetite, but occasionally in the afternoon of each day had a constant inclination to relieve the bowels, which, however, on attempting, always produced intense agony induced by the screams; this was always accompanied with painful erections of the penis and inability to pass urine. Pulse 100, skin cool, but was occasionally in a state of perspiration, especially after attempts to relieve the bowels; tongue clean, and slightly redder than natural; the belly was not enlarged. The course of the intestine could be distinctly traced, and felt under the fingers like a well-packed dry coil of sausage. The bladder was distended, and its outline was easily observed above the pubes; no vomiting nor bad symptoms of any kind. The rectum at its outlet, the verge of the anus, was intensely congested, tender, and in a state of passive inflammation, bordering on the gangrenous condition, much distended, and, as I afterwards found, firmly impacted with a dry hard mass of excrementitious matter. These were the general symptoms and history as far as I could trace them. I had taken the precaution to bring with me one of Davidson's elastic enema syringes, and, being fully satisfied from my examination that the inflammation did not extend along the anus, I prepared an enema, made of soap suds and castor oil 1½ pints, and attempted to inject it, but could only get the nosle of the delivery tube inserted about an inch, which grated against the hard impacted fæces; consequently as fast as I streamed the enemata into the rectum, it returned without carrying with it any fæcal matter. The introduction of the nosle of the syringe was attended with agonizing pain, and made the little fellow roll about on the bed. I persisted, however, for five or six minutes, for the purpose of relieving the anus, and succeeded in introducing my finger, well oiled, with the object of breaking down the contents of rectum, but could not

succeed; small fragments of the dry seeds of the raspberry fruit, however, were detached, and on mentioning this to the mother, she informed me, for the first time, that the child had been eating freely of this fruit for some time. I now concluded that the rectum and perhaps the greater portion of the gut was impacted with the accretions of this seed. On making a second examination, the anus was so sensitive, and the poor little fellow cried so much when I approached him, that I put off any further interference for a couple of hours, directing a warm bath to be given, enjoining perfect rest and friction, with warm castor oil over the abdomen, and left. In three hours afterwards, provided with a scoop made under my directions, in shape somewhat like a tea-spoon, the handle being longer and round, and the scoop narrower and oblong, I then made a final and successful effort in removing the entire contents of the rectum, proceeding, as in the first instance, with the enemata, made in exactly the same manner, only increasing the quantity to a gallon, or more. After a relaxation of the anus by the action of the tepid suds, I introduced the scoop, and in a few minutes succeeded in crushing down several chunks as large as beans; then washed out the rectum with a full stream through the instrument directing its force on the impacted mass, and then the scoop, alternating the enemata and scoop at intervals for an hour, at the end of which time I observed a tendency in the rectum to expel its contents, which I encouraged by getting the child to sit on a chamber. The pain on doing this amounted to torture, when attempts were made to bear down, and I was under the necessity to prevent him making the effort; he had such a dread of the instrument, his father was obliged to lift him from off the chamber. On making examination with the finger, the very same impaction existed, no alteration in the position of the mass, for I was not without hopes that the effort to expel the contents of the gut, would produce a descent of them at last. Continued enema and scoop as before, at intervals alternately, and was at last rewarded by obtaining a voluntary discharge of excrement in the form of a roll, about four inches in length by one inch in diameter, which actually shot from the rectum. Seeing this, I suspended the further use of enemata and scoop, which was now no longer required, having spent in all, from the commencement of the use of the scoop, one hour and a half in effectually dislodging the obstruction; ordered a dose of castor oil, a dessert spoonful, to be repeated every three hours, until operated, a warm bath to be given at once, and enjoined perfect rest. The following morning, patient up and about, free from suffering. The castor oil acted after the second dose, inflammatory symptoms and tenderness of anus subsiding, appetite returning, and in all respects patient free from danger.

In commenting on this case, it is interesting to bear in mind the length of time, fourteen days at least, without any evacuation. The solidity, hardness and dryness of the impacted mass, the distension of the rectum, and, what seems very singular, the entire absence of inflammatory symptoms, excepting only at the extreme verge of the anus. The wasting, loss of appetite and starved appearance suggests the reflection, whether the non-irritating character of the raspberry seeds was due to the otherwise healthy condition of the child, or to the specific non-irritating properties of the seeds themselves, the emaciation being the result of deficient nutriment, and the loss of appetite to the fact that the alimentary canal was loaded, and, therefore, unable to admit of any further supply from the stomach.

In a somewhat parallel case that came under my care some time ago, the impaction of the rectum resulted from eating the wild strawberry, but in this case there were all the usual symptoms of acute inflammation; the enemata was used very cautiously, but attended with the happiest results; the obstruction continued six days, and only the first portion of the contents of the rectum had to be removed by the scoop, which in this case was the handle of a tea-spoon.

I am inclined to the opinion that the absence of inflammation in the first case now cited was due to the non-irritating properties of the raspberry, and in the latter case to the irritating action of the strawberries. The opinion is advanced, not only from the comparison of the two cases above reported, but also from the therapeutical effects of the raspberry, either the juice or the decoction is an excellent remedy in the first stages of the ordinary bowel complaints of the summer season; its peculiar action seems to depend rather on the properties it possesses in correcting the secretions, than from any constringency that may exist in either the seeds or decoction of the leaves.

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## LONDON CORRESPONDENCE.

The time is rapidly approaching for the annual meeting of the British Medical Association, which takes place this year at Oxford. A large gathering is expected, and amongst the visitors who have intimated their intention to be present, are several American physicians of note, such as Dr. Gross and Dr. Pancoast, both, I believe, of Philadelphia. If the weather proves as warm as it is at the present time, then I suspect that those who attend the meeting, like myself, will prefer to ramble in the

cool rooms of the Bodleian Library and other interesting spots, in preference to being pent up in hot rooms listening to papers that all can read in the pages of the journal of the Association. *Apropos* of the warm weather, with its high temperature, 84° and absence of rain, I may observe that some knowing ones say that there has not been such another hot summer since the year 1818. Most assuredly I have experienced nothing like it since I took up my sojourn in England. To give a good idea of what it really is to the readers of your journal, it can be compared to nothing else but a warm Canadian summer, minus the frequent thunder storms with plenty of rain, which are rare enough here. The usual summer diseases are prevalent, but on the whole we have no reason to complain. Several fatal cases of sunstroke have occurred, which perhaps says more for the amount of heat than anything else. Cholera we have no reason to fear, I trust, and there are no accounts of its prevalence, either in neighbouring countries. Many persons in this country have been gratified to read in English journals, copied from Quebec papers, the notice of the handsome testimonial presented to Dr. Marsden of Quebec, for his labours in the cause of sanitary reform. No one in Canada is so well worthy of this mark of attention, for Dr. Marsden has been all his life an energetic and laborious investigator, which honorably reflects upon the country and city to which he belongs. Conferring upon him the honorary degree of M.A., by Bishop's College, is a graceful act, that reflects honour upon the college. In this country, conferring honorary degrees upon distinguished, worthy and deserving men, is the rule, and not the exception. May it be so with the colleges of the Dominion of Canada.

In the June number of your journal is an editorial article upon the Medical Practitioners (Colonies) Bill, which I have read with some attention, because the substance of it, I may say, I communicated to His Grace the Duke of Buckingham, in a letter dated April 25th, and at the same time I forwarded a petition to the House of Lords, in favour of the original bill, which His Grace kindly consented to present. Unfortunately, just before this, a deputation from the General Medical Council, and one from the Parliamentary Committee of the British Medical Association, waited upon the Duke, and they succeeded in having the bill so modified, as merely to confirm privileges which were already possessed independently of the mother country. In my letter to the Duke I strongly denounced the unjust and unfair system which exists under the "Medical Act" of rejecting the Colonial degrees for registration, when the holders of them really possessed higher qualifications than many of the possessors of degrees and diplomas from the

mother country. I characterized it as an act of gross tyranny on the part of the framers of the Medical Act against the Colonies. I trust some members of Parliament of the Dominion of Canada will take the subject up, and bring in a bill for reciprocity of registration. If they will not recognize Colonial degrees here, which are superior to a host of English qualifications, then let the Canadian Legislature refuse to recognise British degrees, unless the holders are submitted to examination. Surely the colonies do not require the Home Legislature to enact laws for them on Medical or general education. And the colonists may rest assured the public neither desire, nor would dare to force legislative enactments upon them, unless in relation to penal subjects.

My letter to the Duke of Buckingham and my petition to the House of Lords were not made public. I did not desire it, but I trust that your editorial in the number of your journal for June may be seen by some of the members of the Medical Council, Dr. Quain for instance, who has always advocated the recognition of colonial Medical degrees. The liberality of the Canadian system is well worthy of imitation, and the profession has long been well regulated in Canada, indeed years before anything of the kind was attempted here. Here there is so much rivalry, that one college thinks itself better than its neighbour; and although some, such as Oxford and Cambridge, possess the prestige of antiquity, their graduates neither make, nor are they at all looked upon as the best practitioners in the healing art.

The College of Physicians held its annual soiree on the 10th June, and was attended by the *élite* of the profession. Of the great variety of objects exhibited, the most interesting were: Microscopes showing some re-actions of Brucine; Thallium and its salts; Pratt's patent Ptero-type, or Type-writing machine; Carre's new Ice-making machine; and the Decomposition of water by Heat. The college, it appears, still continues to give great dissatisfaction in the selection of names for the fellowship. Some of these days there will be open revolution within its walls.

The name of Dr. Ramsbotham will, no doubt, be familiar to many a Canadian student, as the author of an excellent standard work on midwifery, that will long maintain its place in Medical literature. He had retired from practice and lately died at Perth, greatly respected and deeply lamented.

An old Canadian student, in the person of Mr. Cecil Percival Stone, turned up lately in London, whose name is worthy of mention in your pages. He abandoned physic, took to the sword, and entered as an ensign in one of the regiments of the Line. He has been in India fo

many years, where he served with distinction in the 77th regt. as a Lieutenant, although I believe he is now a Brevet-Captain. His medica knowledge has made him a valuable officer, for he has held some high positions out in India.

Mr. Richard Quain is the new President of the College of Surgeons, and his election has given general satisfaction. Sir James Simpson lost his election of Principal of the University of Edinburgh by a single vote. Dr. Burrows has been re-elected President of the General Medical Council: he will increase his popularity by exerting himself to do common justice to the holders of colonial degrees. It is expected there will be several medical M.Ps. in the next parliament, and of various names mentioned is that of Dr. Walsh, who would prove one of the ablest men in the House, if elected.

In one of my letters last year, I offered to be the medium for communicating any paper at the next meeting of the British Association for the Advancement of Science, to be held at Norwich on the 21st August. Nobody, thus far, has responded to my appeal, but I hope again to send you another letter after the meeting with all the latest news in science. It may interest your readers to know, that it is reported that Ethnology is to be taken away from the section of Geography, and added to Anthropology. The study of Anthropology is steadily extending all over the world, and numerous societies are forming everywhere.

London, July 22nd, 1868.

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## REVIEWS AND NOTICES OF BOOKS.

*Atlas of Venereal Diseases.* By A. CULLERIER, Surgeon to the Hôpital du Medi, &c. Translated from the French, with notes and additions, by FREEMAN J. BUMSTEAD, M.D., Professor of Venereal Diseases, College of Physicians and Surgeons, New-York. To be completed in five parts. Philadelphia: Henry C. Lea. Montreal: Dawson Bros.

We have to acknowledge the receipt of the first three parts of this really most admirable treatise from the pen of one of the first syphilographers of Europe, and re-published at Philadelphia, under the editorial supervision of Dr. Bumstead, who, perhaps, above all others on this continent, is an authority on the subject of syphilitic diseases. It is to be completed in five parts, and will contain about one hundred and fifty beautifully coloured figures and twenty-six large plates. Judging from

the parts that are already in our possession, we have not the slightest hesitation in saying that the work promises to be very valuable—the text is printed clearly and the illustrations leave nothing to be desired. Its author is the successor of the now famous Ricord at the Hôpital du Midi, and at this celebrated charity as well as at the Lourcine, where he was for many years chief, ample opportunity has been afforded him of studying in all its varied forms the subject of syphilis. Part I opens with a somewhat lengthy introduction, in which a very interesting and instructive history of syphilis is given, with excellent directions how to study the disease. He very forcibly points out the value —nay, the necessity which exists in this disease, as in all others, for clinical observation. It is especially necessary, however, in diseases of a syphilitic origin ; for in making a diagnosis you have two things to contend against, viz., ignorance and falsehood. These, according to Hunter, were his greatest obstacles to the study of venereal diseases. The latter portion of this part is devoted to the history, causes and treatment of blennorrhagia in man, and is exhaustive. In alluding to the proneness that some persons have to contract the disease, he says, " It is natural that persons of a lymphatic temperament, which predisposes to catarrhal affections, should contract blennorrhagic discharges more readily than those differently constituted. But anatomical formation plays a greater part in this matter. Thus a long prepuce which has the advantage of protecting the glans from any traumatic injury, and from friction, preserves, as a consequence, all its delicacy of organisation, and thus predisposes it to take on inflammation during coitus, at the same time that it retains the pus in contact with the meatus ; while, on the contrary, when the glans is habitually uncovered, contagion is less easy. Again, upon the still disputed question as to whether the menstrual fluid is a source of contagion, he says, " The influence of menstrual blood upon the developments of this disease is not so clearly demonstrated : it is usually a few days before, and a few days after the menses, that certain women are dangerous."

Part II continues the subject of blennorrhagia, giving at considerable length its treatment ; also vulvitis, vaginitis, metritis, ovaritis, vegetations, &c., and concludes with an introduction to soft chancre.

Part III contains the description of soft chancre and its treatment, and also embraces hard or indurated chancres. So far then as the work has been published we notice that he (Mr. Cullerier) advocates and supports the doctrines of Ricord, in regard to the non-syphilitic, and non-specific character of blennorrhagia or gonorrhœa. He claims it to be a purely simple inflammation. The doctrine of duality as advanced in 1852 by M.

Barsercau, claiming that the two diseases are the action of the same poison, producing by reason of some constitutional peculiarity, in one case an infecting sore always followed by constitutional syphilis—in another the local non-infecting ulcer, known as chancroid—is warmly asserted by our author. He advances no proof, simply saying that he had almost been converted to the dualistic theory, when cases occurred (which he does not give) which caused him perplexity, and that finally he more firmly than ever embraced the doctrine of unity. This portion of the work receives a very careful dissection from its translator, Dr. Bumstead, who as we all know, is a strong dualist. He attempts to show, and we believe has succeeded in doing so, that while M. Cullerier clings to the doctrine of unity—that when he comes to the treatment of the two varieties—he is practically of the same mind as Dr. Bumstead.

So far as this work has reached us, it promises to be one of great value. it being, we think, a fortunate circumstance that its translation has fallen into the hands of one so thoroughly posted in the ancient and modern doctrines of syphilis as is Dr. Bumstead, whose notes, we consider, very much increase its value.

The illustrations are really very excellent, being executed by the lithotinting process. They certainly are superior to any we have yet seen on this continent—in fact rival very closely, we are informed, the original French productions. The publishers have done their work in a style which leaves nothing to be desired.

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## PERISCOPIC DEPARTMENT.

## Surgery.

### POSITION IN THE REDUCTION OF INGUINAL HERNIA.

By Dr. Joseph B. Bond, Yarmouth, Nova Scotia.

Several years ago, I had a case in which the patient could not reduce an inguinal hernia while lying in bed either on his side or on his back, but as soon as he stood on his feet there was not the least difficulty. If, on removing his truss before going to bed, he neglected to apply his hand to the part and allow the rupture to protrude, he had always to get upon his feet before he could reduce it. Soon after this I was called to a case of strangulated inguinal hernia. After making every effort in the usual way to reduce it, I directed the patient to stand up; I placed

myself (also standing) behind him, and encircled his body with both my arms, grasped the tumour with both hands, and effected in a few minutes what I had failed to accomplish in as many hours. Since then I have had many cases of inguinal hernia in my own practice, and several where I have been called in consultation, and have never failed to effect a reduction in a few minutes in the way I have described. I have never seen this means tried in the Hospital in Philadelphia nor in the London Hospital, although in both these institutions I have repeatedly seen all efforts fail to reduce an inguinal hernia without an operation. Nor have I ever seen it recommended in any surgical work.

My object in sending you this communication is to ask my medical brethren of the metropolis to give the erect posture in the reduction of inguinal hernia fair trial, and to publish the results. In femoral hernia the erect posture has never succeeded in my hands—in three cases I have been obliged to use the knife—in inguinal never. I will not attempt to account for the use of the erect posture in the reduction of inguinal hernia, nor for its failure in femoral. It may be thought that the erect posture favours reduction by causing syncope, but in only two cases do I remember that a feeling of faintness was complained of. In the last case (only a few days ago) the patient, an old man, fainted and fell as soon as the gurgling began to be felt, and I finished the reduction whilst he was prostrate.—*Medical Times and Gazette, Jan.* 4, 1868, *p.* 23.

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## USE OF PAPER FOR SURGICAL DRESSINGS.

Dr. Addinell Hewson (*Penn. Hospital Reports*) struck with the fact that paper has been used in the place of lint as a surgical dressing in the recent campaigns of the Prussian army, tested its practicability at the Pennsylvania Hospital, and, after numerous experiments, has settled on the common newspaper as being the best and the cheapest substitute for lint, linen rags, or muslin.

The advantage of economy is no small consideration, as a yard of good patent lint costs thirty-three cents, while a sheet of paper which equals that article in usefulness as a surgical dressing, costs only one cent.

Dr. Hewson uses also Manilla paper coated with a thin layer of yellow wax, in the place of oiled silk. In this way a saving of from four to six hundred per cent. is gained, besides affording the advantage of discarding everything appertaining to the dressings each day, by which one source, at least, of renewing contamination experienced in the employment of oiled silk is avoided.

## OPERATION FOR PHYMOSIS BY DILATATION.

The *Gazette des Hôpitaux* describes a new method of treating phymosis in infants without the use of the knife, devised by the distinguished surgeon, Nélaton. The infant is placed under the influence of chloroform or ether, and a sound is introduced beneath the prepuce, to ascertain the presence of any adhesions. The blades of a three-bladed forceps, well oiled and warmed, are then carefully inserted between the prepuce and glans, and then suddenly separated. A sensation of a resistance overcome is perceived, somewhat similar to that observed in the dilatation of the same for stricture. The forceps are withdrawn, and no difficulty is experienced in pushing the prepuce behind the glans. Some slight and superficial scratches are perceptible on the glans, but involving nothing more than the mucous membrane. There is no vessel divided, no hæmorrhage, no cutting. A simple dressing is applied. A little cold cream is smeared on the prepuce, which is replaced in its natural position. Five or six times a day it is pushed behind the glans, especially at the times of micturition. For a day or two the child is kept in bed, the swelling which appears after the operation subsides in twenty-four hours without special attention.

The operation has been tried in four cases, with constant success. They were all young children. In one instance it was used on an adult, but failed. But the procedure can doubtless be modified so as to be successful also here.—*Philadelphia Medical and Surgical Reporter.*

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## REMOVAL OF FOREIGN BODIES FROM THE EAR.

From a Report on Hospital Practice by the Editor of the MEDICAL TIMES AND GAZETTE.

The method we are about to describe is so simple that probably it may have occurred to others, and it has indeed been recommended, in print, by Mr. Hutchinson some time ago. It has, however, not yet found its way into our best manual of Aural Surgery (Toynbee, by Hinton), which advises the disappointing plan of syringing, whilst others still recommend the dangerous use of forceps or scoop. Instead of trying either of these, let the surgeon take six inches of fine wire, and double into a loop; then, having the patient placed on his side, pass the loop into the ear as far as it will go, and turn it a little gently. At the first or second withdrawal the foreign body will come out in the loop. The wire being flexible gives no pain, and cannot possibly do damage. It is almost certain to find its way round the foreign body, however deeply the latter may be placed, or however closely it may fit the cavity. Mr.

Hutchinson asserts in its advocacy that it is very much easier to use, very much safer, and lastly that he has several times succeeded with it in cases where other means have utterly failed. The scoop he regards as especially likely to do mischief, since it involves pressure against the wall of the auditory canal. There is in the London Hospital Museum part of the temporal bone of a child who died in consequence of a small bean having been forced by the scoop through the membrana tympani into the inner ear.—*Medical Times and Gazette, March* 7, 1868, *p.* 261.

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## Medicine.

### ON THE PRINCIPLES OF TREATMENT OF DROPSY.

There are two objects to be aimed at in the treatment of dropsy: these are, 1st, to remove if possible, the original and exciting cause of the dropsy; and, 2nd, to remove the dropsical accumulation. If we can accomplish the first of these objects, the second is generally attained with it. The dropsy will soon disappear with the removal of its exciting cause. For instance, the slight anasarca which occurs in chlorotic young women is a result mainly of the poor watery condition of the blood; and the dropsy quickly passes away when the quality of the blood is improved by nutritious diet, fresh air, and exercise, with the use of iron as a tonic, and perhaps an occasional aperient.

In the treatment of acute renal dropsy, it is important to bear in mind the relation in which the dropsy stands to the renal disease; and it is especially interesting to observe the phenomena which occur during the progress of recovery. In particular, there is one phenomenon which deserves notice in connexion with the general pathology as well as the treatment of dropsy. I mean the copious flow of urine which occurs spontaneously during convalescence.

In cases of acute renal dropsy the urine is at first scanty and of morbid quality, being often high-coloured from admixture with blood, always albuminous, and usually containing numerous casts of the kidney-tubes. The scanty secretion of urine is the cause of the dropsy, and the secretion of urine is scanty because the flow of blood through the kidney is obstructed and the structure of the gland changed, the tubes being filled with desquamated epithelium, and with blood and fibrin which have escaped from the gorged Malpighian vessels. Now observe what happens during the progress of cure in a case of this kind. The patient we will suppose to be placed in circumstances favourable for recovery: he is confined to bed; has a scanty diet; the loins are dry-cupped, or mustard and

linseed poultices are applied there; and means are taken to excite the secretory actions of the skin and bowels, and thus to lessen the work of the kidneys. Soon the secretion of urine begins to increase, until, in the course of four or five days, perhaps, the quantity of urine, which at first had been less than half the natural amount, becomes three times as great as the standard quantity, no diuretic medicine of any kind having been given.

The explanation of this spontaneous diuresis appears to be this. During the acute stage of the renal disease, the constituents of the urine, both solids and liquids, have accumulated in the blood, and have thence been effused into the areolar tissue and serous cavities. Now, urea itself is a most powerful diuretic; and no sooner is the inflammatory congestion of the kidney removed, and the freedom of the renal circulation restored, than the urea exerts its natural diuretic action on the kidney. The copious diuresis thus induced speedily removes the accumulated urinary solids and liquids from the blood, the areolar tissue, and the serous cavities into which they had been effused, and so the dropsy is cured.

The abundant flow of urine occurs without aid from diuretics or drugs of any kind. I have seen it happen while bread-pills alone were given as a *placebo*. Stimulating diuretics, such as squills, or cantharides, or turpentine, are injurious, by increasing congestion of the kidney. The best diuretics in such cases are means which tend to lessen the congestion of the kidneys; counter-irritation over the loins, especially by dry-cupping, hot-air baths and diaphoretics, purgatives, and a scanty diet.

In some cases of chronic renal dropsy, diuretics may be given without risk, but too often without much benefit in the way of removing or lessening the dropsy. A pleasant and efficacious diuretic is the imperial drink made with lemon, cream of tartar and sugar, with the addition of gin, in the proportion of a wine-glass to a pint. Hot-air baths often distress the sufferers from chronic Bright's disease; for the reasons which I have before given, the skin does not readily perspire, and the body consequently becomes painfully heated. Of late, therefore, I have been in the habit of prescribing for these patients a daily packing for two or three hours in a wet sheet and blankets. In this way I succeeded in obtaining a more prolonged and copious diaphoresis, and that too, with less distress, if not with actual comfort to the patient.

In the treatment of cardiac dropsy, while we endeavour to remove the fluid by diuretics and by purgatives which excite copious watery discharges from the bowels, it is desirable to do what we can to sustain the power of the heart by nutritious food, stimulants, and tonics. Little or nothing can be done to repair a damaged valve, but much may be done

to strengthen the muscular walls of the heart, and thus enable it to overcome the impediment to the flow of blood and the consequent tendency to dropsy which a diseased valve occasions. A combination of tincture of the perchloride of iron with tincture of digitalis is particularly useful in some cases of cardiac dropsy.

When other means fail to remove a dropsical accumulation, we may often afford great temporary relief, and prolong life sometimes for a considerable period by mechanical means—by tapping the abdomen, for instance, in a case of ascites; by acupunctures or incision through the skin of the legs for the removal of anasarca.

It is very interesting to note the phenomena which follow upon puncturing or incising the legs in cases of anasarca. There is first a copious drain of liquid from the punctures. Secondly, there is a further exudation of liquid from the over-distended blood-vessels; this liquid also escapes from the punctures or incisions, and its escape is often associated with temporary symptoms of exhaustion, such as a rapid and feeble pulse and a pallor of countenance. Thirdly, there occurs often a copious secretion of urine, in consequence of a more free circulation of blood through the kidneys.

Dropsical accumulation tends to cause a secondary impediment to the circulation by the pressure of the effused liquid from without upon the blood-vessels. And, again, the capillary circulation becomes more and more impeded in proportion to the increasing distension of the veins, which results from cardiac or renal disease. The drain of liquid from the areolar tissue, allowing of a further exudation from the capillaries, thus removes or lessens the obstruction which results from over-fulness of the veins. The general circulation therefore becomes more free, and the greater freedom of the circulation through the kidney, is attended as we have before seen, by a more copious secretion of urine. The greater freedom of the circulation through the kidneys is shown not only by the more copious secretion of urine, but also by the diminished amount of albumen; and not unfrequently when albuminuria has been caused by passive congestion, the result of cardiac disease, the albumen quite disappears for a time after a copious drain of dropsical fluid through the skin.

The free action of a hydragogue—elaterium for instance—is often followed by a copious secretion of urine. The gorged vessels are partly unloaded by the drain of liquid from the bowels; the circulation through the kidneys, as through other organs, consequently becomes more free; and hence a copious secretion of urine, and a rapid diminution or even a complete removal of the dropsy.—*British Med. Journal, March* 7, 1868.

## CARBOLIC ACID A CURE FOR TOOTHACHE.

[A Correspondent writes to the Lancet as follows :]

Among the many virtues of carbolic acid is that of giving relief from the pain of toothache. I have tried it in a great many cases, and with invariable success. To one drachm of collodium flexile (B.P. 1867) add two drachms of Calvert's carbolic acid, full strength. A gelatinous mass is precipitated. A small portion of this precipitate inserted into the cavity of an aching tooth gives immediate relief. It may be kept in the cavity by means of a bit of lint dipped in the collodium.—*Lancet, Feb.* 22, 1868, *p.* 275.

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## PEROXIDE OF HYDROGEN AS A REMEDY IN DIABETES.

By Dr. John Day, Geelong, Australia.

[The patient was 36 years of age, and was progressively getting worse, passing as much as five quarts of highly saccharine urine during each night.]

While pondering over the hopeless condition of my patient, it occurred to me that if I could oxidise the sugar that had been taken up in the general circulation, it would be an approach towards the natural mode of elimination by the lungs. With this object in view, I gave half-drachm doses of ethereal solution of peroxide of hydrogen mixed in an ounce of distilled water, three times a day.

To enable me fully to explain the theory on which I base my treatment, would occupy far more of your valuable space than I could justly claim. Schonbein believes that peroxide of hydrogen is H O antozone, and that the blood-corpuscles possess, in a very high degree, the property of decomposing it, and of transforming its antozone into ozone, without, in themselves, undergoing any very rapid change ; and he further believes that ozone is the only condition in which oxygen possesses any active combining properties. Assuming these views to be correct, we should possess in ethereal solution of peroxide of hydrogen, which would be rapidly absorbed, a ready means of destroying, by oxidation, the sugar in the blood, and of also maintaining the animal heat, which, in the treatment of diabetes, is an important consideration. I may observe, that what is sold by Mr. Robbins as Dr. Richardson's ozonic ether is, in reality, a solution of peroxide of hydrogen in ether. This may be readily proved by adding a few drops of it to a weak solution of chromic acid : a beautiful blue colour will be the result, caused by the formation of perchromic acid. This preparation is in every respect similar to that which I have been using, and in the therapeutical effects of which I have now had some years' experience.

I commenced the use of this new remedy on August the 10th, and, as the following extracts from my case-book will show, with most gratifying results to the patient:

Aug. 12th. From 10 p. m. to 10 a. m., passed about five pints of urine. Previously for many months, the quantity of urine passed during the night averaged five quarts.

13th. Quantity of urine passed during the night, rather less than three pints and a half. Thirst not so urgent.

14th. Quantity of urine passed during the night, two pints and a half. Urine strongly acid; specific gravity 1046. Thirst much less urgent.

16th. Quantity of urine passed during the night, rather less than forty ounces. The patient very much improved in every respect. I give her own words:—"I have no thirst now; no more than I had in olden times. I feel that I am cured if it will only last."—*Lancet, Jan.* 11, 1868, *p.* 45.

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## ON THE EXTERNAL USE OF DIGITALIS IN SUPPRESSION OF URINE.

By J. D. Brown, Esq., Haverfordwest.

*Case* 1.—Mr. H., a healthy young farmer, aged 23, was suddenly seized with severe pain in the bowels and back. I saw him at the end of seven days. Bold treatment had been enforced by Dr. John Thomas, of Narberth, such as bleeding, sweating, blistering, warm baths, but in vain. A catheter was passed on my arrival, and about a teaspoonful of urine was removed, highly albuminous. His condition was nearly hopeless when we met the next day. Vomiting and nausea prevailed with heavy dull pains, and he was evidently sinking. It was now the ninth day, when we agreed to try the effects of digitalis. It was useless to administer it by mouth, and there was no time to lose. It was the month of May, and digitalis was plentiful. A poultice of leaves, bruised and warmed in boiling water, was applied at 12 a. m. We left, saying that if no urine came away by six in the evening a fresh poultice was to be applied. We had no sort of hope of the patient's recovery, and communicated our opinion to the friends on leaving. By 6 p. m. no urine. A fresh poultice was applied to the abdomen. About 10 that night urine passed. At 4 a. m. I was sent for, and Mr. Thomas who lived nearest, got to the house by 6 or 7. The messenger, to my utter surprise, said that they could not stop him making water. He had then made eight ordinary sized chamber vessels full, and was still making it when he left. We met at 10 a. m., but he never rallied; the drain was too

much. Digitalis had been badly handled by us. We left no guide, no rule, and too much was absorbed. It did well, but went beyond its work. He lived till night.

*Case* 2.—A. R., servant, aged 45, subject of renal calculus and gout, was suddenly seized with suppression, but had no great amount of pain beyond what he usually suffered in passing small stones. I saw him on the fourth day, in consultation. All the usual remedies had been tried in vain. It was winter, and digitalis was given, but not in bold and sufficient doses at first. At the end of the sixth day it was boldly given in large doses, and a poultice applied on the seventh day; urine passed freely, and all went well. He still lives in his usual health.

*Case* 3.—Mrs. L., age 50, subject of renal calculus. Suppression came on, with vomiting and the usual symptoms. At the end of four days, every other plan having been tried, I recommended the poultice. It was winter, but leaves were obtained and applied as usual. I returned in six hours, when two chamber vessels full of urine had been passed. All the symptoms gave way, and for two days she continued to do well. Again suppression came on; she was neglected by her attendants, and the poultice was not again applied. She sank at the end of the twelfth day, no water being passed except for three days when digitalis was in the field.

*Case* 4.—Mr. G., a gentleman about 40, subject to renal calculus, having passed one year ago, in good health up to Friday morning, when he was suddenly seized whilst dressing with intense agony in the right renal region. His medical attendant, Dr. Rowlands, of Carmarthen, saw him immediately, subdued the pains, but, to his surprise and vexation, no urine passed. A catheter was passed; there was no urine in the bladder. The usual treatment (baths, leeches, and opium) was actively employed without avail. Dr. Lewis, Carmarthen, was then called, who persisted, in conjunction with Dr. Rowlands, with the remedies. On Monday, I saw him with Dr. Lewis. I told him of my success with digitalis. He was surprised, but did not like to undertake its management unless in concert with Dr. Rowlands, who was then out of town. We agreed to give it in one-grain doses every four hours until Tuesday morning, when we again met. We then agreed to apply the poultice. It was May, and we procured plenty of fresh leaves. Dr. Rowlands and myself made and applied it. He undertook to watch the pulse, which we took for our guide. It was 109 at 11.30; catheter passed no urine; few drops of blood; poultice applied over abdomen; in ninety minutes, pulse 76; poultice taken off. A call for the chamber vessel; a good stream of water; in twenty-two hours, seventy-five ounces

were passed. Specific gravity 1·15. Acid, slightly albuminous, a little blood, and casts. Improvement kept pace. Friday: Symptoms of stone again, which gave way to the usual treatment. Saturday: Plenty of urine; recovery complete.

*Case* 5.—Mr. R., aged 54, subject to renal calculi, was suddenly seized with symptoms of renal calculi passing off in December, 1867. Mr. Hicks, of St. David's, and Mr. Howell saw him, and used every available means that practice could command for two days, but in vain. Mr. G., of Carmarthen, the subject of the preceding case, being in the neighbourhood, hastened to the house, told the doctor of his cure, and begged them to try it immediately and to send for me. Fresh leaves were collected, and a poultice applied, but having no guide nor experience in its use, it was taken off too soon. I arrived at 4 a. m. Being sixteen miles distant, much time was lost. This was the third day. A catheter was passed, to satisfy ourselves as to the state of the bladder. No urine. I had brought some dried leaves and tincture with me. A poultice was made of ℥ ss of tincture with fresh and dried leaves; poultice applied at 5 a. m.; pulse about 80. At 8.30 a. m., Pulse reduced about 15, and about ten ounces pale, clear, slightly albuminous urine came off. A fresh poultice applied at 10, and I left, with directions to take it off when the pulse came down to 60. Plenty of urine continued to be secreted, and from that time he has continued to improve. Urine is now slightly albuminous and alkaline, in spite of our remedies. This gentleman was much out of health, and had been for two years the subject of renal calculi, nausea, and dyspepsia, but he is much better, and improving under phosphoric acid and iron.

*Case* 7—Mrs.——, aged about forty, was suddenly seized with suppression of urine. In spite of every remedy, to the fourth day the suppression continued. Severe symptoms were now developed, and a tendency to stupor was amongst them, pulse indicating mischief. It was now decided that they should try the digitalis plan. One ounce of the tincture was mixed with a warm linseed poultice, and kept on overnight. The next morning a large quantity of urine passed. The poultice was kept on the abdomen all next day; urine was plentifully secreted; and from that time she improved and got well.

There may be a difficulty in obtaining leaves collected before seeding time, which appears to me to be the period of most vigour, judging from the fact that Nature concentrates her powers for the multiplication of species, and which at seeding time would pass into the young, leaving all other parts more or less exhausted. I believe from experience the winter leaf is very deficient in power. The tincture, mixed with lin-

seed meal, succeeded in Messrs. Rowe and Phillip's case (Case 6); the fresh powder or dried leaves would be equally efficient. The rules of management must depend on the pulse. I have seen no good results till the pulse fell in number; it matters not from what figure; fall it must before any change occurs. In Mr. G.'s case it fell from 109 to 80 in ninety minutes; In Mr. R.'s, from 80 to 65 in three hours and a half. I would strongly advise 60 as a standard from a high number; 40 or 50 from a lower figure—say from 80. Judging from the effects on the circulation, we cannot lose sight of the fact that the arrest of secretion depends on capillary congestion, which in turn might, by pressure, paralyse the nerves. The fact, however, remains that we compel the kidney to resume its functions by diminishing the force of the circulation, lessening the quantity of blood by allowing a much longer interval between each new arrival. Strange, too, it is that in four cases the attack commenced suddenly like a fit of stone, and, in reality, stone came away in each case.

These cases are reported with the object of calling attention to the effects of digitalis in that dangerous disease, and of inducing the medical world to give it a trial. It is not supposed that it will succeed in all cases of that mysterious disease; but it is clear that it has a powerful influence over the renal secretions, and if carefully watched, taking the pulse as a guide, no mischief need be feared. I own there was a want of caution in the management of my first cases—indeed, it was only used as a hopeless remedy—but as the truth broke upon me, it was clearly seen there was a power in use I had not clearly foreseen, and more skill and caution was enforced in its management.—*Medical Times and Gazette, Jan.* 25, 1858, *p.* 86.

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## ON THE TREATMENT OF PRURIGO.

By J. L. Milton, Esq., Surgeon to St. John's Hospital for Diseases of the Skin.

In all forms of this justly-dreaded affection, the remedies which seem to have succeeded best resolve themselves pretty well into six classes.

1. *An alkali.*—Soda, for instance, seems to have always been a favourite ingredient in the prescriptions of the most successful practitioners. I do not attribute much importance to the form in which it is given; perhaps the carbonate, or a mixture of carbonate and sulphite answers best. If there be much indigestion or acidity, ten grains may be given two or three times a day, just after meals, either in an ounce of bitter infusion, with which a little compound tincture of cinnamon or spirit of nutmeg is combined; or it may be administered in conjunction

with aromatic confection and dilute hydrocyanic acid. These remedies should be continued till indigestion is removed. Should no indigestion be present, they may be given up at the end of of ten days or a fortnight.

2. A remedy is required which will act on the skin. Sulphur in some form or other is perhaps the mildest and most certain. Antimony, however, in such a preparation or dose as will not nauseate or depress, may also be prescribed with benefit, and I see no objection to combining these remedies with a little nitrate of potass. When the skin is very dry and harsh, as it almost always is, a powder containing these ingredients may be given on going to bed, in a little gruel, or warm whey. Like the previously mentioned remedies, these need not be continued more than about a fortnight.

3. The use of either of these two sets of remedies should be accompanied by a course of medicine which will act gently on the liver and bowels, as, for instance, the occasional use of small doses of iodide of potassium, with rhubarb, either in the form of infusion or pill. A little mercury may be given in the shape of blue pill, combined with soap, henbane, aud jalap or colocynth; or as grey powder, with nitrate of potass. Mr. Startin placed mercury under interdict, though I have never seen it do the least harm.

4. But the great internal remedy in prurigo is arsenic, and in all very severe or long standing cases, and in those which do not seem to be benefited by the preceding treatment, I would advise that it should be immediately begun with, and the other remedies used only as auxiliaries, or in the place of the arsenic when it is necessary to interdict it. It may be prescribed in full doses, and when this is done, I am disposed to share Mr. Hunt's opinion that prurigo is not such an intractable disease if properly treated, although I am aware that the statement may be looked upon as a modern heresy, and that Mr. Wilson considers it a stubborn and even a grave complaint in elderly persons. Under the old plan of treatment it seems to have resisted every attempt to subdue its malignity, and, perhaps there were more suicides from prurigo than from all other diseases of the skin put together. Mr. Hunt says:—"Of the entire recovery of a patient thus affected, or even of considerable alleviation of suffering, not one single gleam of hope can be gathered from any author who has written on the subject. And yet there is no truth in the whole circle of medical science more vividly impressed on my own mind, than that, under proper management, arsenic is an effectual remedy for this disease." Mr. Hunt bleeds to faintness in refractory cases before giving the arsenic; in one case he took about seventy ounces of

blood from the arm, and probably fifteen additional ounces by leeches, and certainly, according to his statement, the success seems to have quite justified the means. Lisfranc used always to bleed in cases where the itching was connected with difficult menstruation, and the practice is said to have been very beneficial.

5. Certain remedies which seem to stimulate nutrition in some as yet unknown way. Of these two are well worth a trial—strychnia and cod-liver oil. The strychnia may be given in doses of a sixtieth or a sixty-fourth part of a grain every three or four hours, till a decided effect is produced upon the disease or till nervous symptoms show themselves, when it may be left off. It sometimes acts like a specific upon the pruritus, and when this symptom is once thoroughly quelled, we shall seldom, if ever, have much difficulty in dealing with the remaining symptoms. Nux vomica was a favourite remedy with Neligan, but I believe we are indebted to Dr. Burgess for this mode of exhibiting its active principle. It should not be taken along with any other remedy, whereas the cod-liver oil may be given almost as an article of diet for a long time, and in moderate doses, quite irrespective of any other medicine the patient may be taking. I confess my entire ignorance as to how cod-liver oil and strychnia, may act, and it may, perhaps, save some trouble if I say, once for all, that I am not prepared to offer any explanation of the action of medicines, for the simple reason that in respect to most of them nothing whatever is known for certain, and as to cloudy conjectures and cabalistic forms of speech, I leave them to those who like them. I am content to admire at a distance the person capable of solving such questions as causes and modes of action, as I quite despair of my own ability to do so.

6. A free use of hot baths, especially the Turkish bath. I prefer the latter when it can be used; but when the patient is very nervous, suffering, or supposed to suffer, from disease of the heart, or subject to fainting; when he resides at a long distance from any establishment or baths of any kind, or when expense is an object, the hot bath is our only alternative, and fortunately it is a good substitute. The water should be at ninety-eight or a hundred degrees of Fahrenheit. The patient, so soon as he enters the bath, should scrub himself all over with the flesh brush, lather the affected parts with either the soft soap of the London Pharmacopœia, or Pear's transparent soap, and then let himself down into the hot water, in which he ought not to remain more than three or four minutes. Having dried himself thoroughly, he should apply any ointment he may be using, and dress directly.

But the Turkish bath is the thing; it scarcely ever fails to do good,

and is, perhaps, more peculiarly suited for prurigo than for any other disease of the skin. There are many persons in the habit of sponging all over daily, and who, therefore, have quite made up their minds that they require no other kind of purification. They cannot too soon be undeceived as to the efficacy of water used in this way: it will no more free the skin from soot, dust, dead scarf skin, and secretion, than rubbing a horse gently down with a soft towel will make his coat glossy. To rid the surface thoroughly of these impurities, two things are necessary: free perspiration must be induced, and the skin must be well rubbed and kneaded. Trainers are well aware of this, and when preparing a man for a fight, make him perspire freely, and then rub him down with a hard towel. The vigorous system of cleansing adopted in a Turkish bath is more like that used in training than any other, and will soon open the eyes of those who put their faith in cold sponging only, by bringing away an unexpected quantity of dirty skin. As there is no danger to be apprehended from the use of the bath, so long as the simple precaution is adopted of not staying in too long at first, and always taking the bath on an empty stomach, it can scarcely be overdone. I have known one taken three or four days together without any harm arising from it, and should not anticipate any.

Some most extraordinary objections have been made to it. Mr. Hunt, for instance, expatiates with grim sarcasm on the portentous aspect of things on entering a Turkish bath—the air so hot as to make one fancy that it cannot be breathed without setting the lungs on fire, kneading and trampling on the patient, and the drowning with a deluge of cold water, but he admits that it cures fanciful people of their whims in superlative style. Then one of the whims it will cure them of is fancying there can any harm come from using the bath.

Whatever form of bath be adopted, I would strongly insist upon the necessity for taking it regularly and often enough, and not yielding to any nonsense about baths being lowering, weakening, &c. I dwell upon the subject because the advantage of hot bathing in prurigo generally so soon becomes manifest. If nothing else be gained, free perspiration is promoted, and though this is no panacea, yet it is attended with relief. Prurigo often breaks out in persons who have nothing to reproach themselves with in regard to cleanliness. Mr. Startin, indeed, says, "that the neuralgic itching which some writers consider as a form or variety of prurigo is, perhaps, more frequently met with in the respectable walks of life than any other cutaneous affection." Such persons often seem surprised at being told to make free use of hot baths, but they forget that they do not take sufficient exercise to keep the skin in a healthy state,

and that means which would do very well with men riding twenty miles a-day, or working hard at training, are quite inefficient when exercise is reduced to a gentle stroll. Elderly persons in good circumstances, and people who have retired from business, often seem to think it is hardly respectable to go beyond a steady walk, but prurigo will not yield to such gentle means, and till regular active exercise has become a settled habit, the action of the skin must be encouraged. In all cases I think no woollen ought to be worn next the skin.

Mr. Wilson gives generous diet and tonics in this disease, and considers arsenic, properly given and watched, as a specific. Frictions, baths, carbolic acid soap, and juniper-tar soap, are his chief local remedies, but he looks upon the prognosis as doubtful, on account of the exhaustion and suffering which accompany the complaint.

Mr. Startin's treatment of prurigo is that of lichen; he relies chiefly on mineral acids, chalybeates, opium, and ammonia, and has never found benefit from mercury or arsenic; on the contrary, they rather do harm. In a very severe case of prurigo formicans, recorded by this gentleman, twenty drops of dilute sulphuric acid and ten of Batley's sedative three times a day, followed by tincture of muriate of iron, in infusion of quassia, and an opiate at bed-time, proved perfectly successful. These means were, however, seconded by the use of an ointment of white precipitate of mercury and creosote, ten grains of the salt, and a few drops of the fluid to an ounce, and after this a weak solution of bichloride of mercury in creosote water, used warm; later on, the ointment was entirely discontinued, and bisulphuret of mercury was added to the lotion. A strict diet, consisting of milk, bread, and boiled meat, was observed. Mr. Startin finds hot air baths and cinnabar fumigations of great service. Dr. Neligan used to prescribe iron in infusion of hops, with the juice of conium in pretty large doses. He found in the prurigo of old people great benefit from the use of this remedy along with magnesia. Some years ago, Dr. John Waterfield communicated to the *Lancet and Medical Gazette* a paper on the value of tar and charcoal pills, and he now tells me that he has treated several cases of prurigo very successfully with this remedy. Dr. Hillier says that, in some chronic cases, diuretics, "such as the sweet spirits of nitre, decoction of broom, with the ground tincture of juniper and saltpetre," are of benefit. Dr. Purdon communicated to the *Journal of Cutaneous Medicine* three cases in which the bromide of ammonium, in doses of from ten to twenty grains, effected a very rapid cure.

Hebra, who only admits prurigo mitis and formicans, views the malady in its gloomiest light; the picture is filled in with the most sombre tints

that utter despair of being able to do any good can lend. The patient is doomed *tenero de ungue*. The relentless malady begins with childhood; even in his schoolboy days the martyr to it is an outcast; playfellows and masters alike shun and worry the victim of unappeasable itching. As he grows up, he is expelled from society or becomes a recluse; if he be a working man, he must not sleep in the same room with a fellow workman. He dare not try to establish a home, nor, should he already possess one, can he bring a wife to it. With advancing life the disease acquires more hold on the system, and only leaves him in the grave. Till that hour comes he knows no hope and no peace. The complaint is not difficult to cure, for the simple reason that it is incurable, and all that the physician can do, is to make the patient's condition a little more tolerable. Hebra seems never to have given arsenic a fair trial, and it may be safely predicted that so long as he does not, he will find the complaint as refractory as he describes it to be. He utterly abjures bleeding, purgatives, and starvation, possibly with reason; but in point of fact I know nothing of the disease as spoken of by him, and never read of it in the pages of any other writer. Possibly in this severe, hopeless form it is as peculiar to Austria as pellagra to Italy.

In some cases, particularly when prurigo attacks the pudendum, scrotum, or anus, the itching is so intolerable that something must be done locally for it; indeed the itching is the symbol of the malady, the one essential and tangible symptom, and the cure of it is the cure of the disease. Mr. Wilson recommends in a general way that the skin should be frequently rubbed with a damp sponge, dipped in fine oatmeal; after this, the tincture of croton, made by steeping an ounce of bruised croton seeds for a week in four ounces of spirit, is applied; and after this has been done a few times, a lotion of bichloride of mercury in almond emulsion, fifteen or twenty grains to a pint, will often prove very efficacious. Painting the surface with iodine is useful, as is also glycerine applied with a sponge. For the affection of the pudendum, Bateman recommends a lotion made of two grains of bichloride (oxymuriate) of mercury in an ounce of lime-water. Mr. Wilson says the juniper-tar ointment is peculiarly valuable in this variety. In pruritus of these parts injections of very hot water, juniper-tar ointment, blisters to the thighs, and small bleedings, seem, from all accounts, to be the most reliable means of cure. Mr. Wilson has found an opium injection relieve the irritation after all other means had failed. Strong nitric oxide of mercury ointment, and podophyllin in doses of one-sixth of a grain, are said to have proved of great service in prurigo of the anus. Mr. Startin, in a case related in his lectures, where the scrotum was also

affected, directed mucilaginous hip-baths, daily ablutions with yolk of egg and tepid water, the application twice a day of very dilute mercurial ointment, with a few minims of creosote, strict diet, and one sixth of a grain of bichloride of mercury in cold infusion of hops three times a day. The case was very severe, and occurred in an old man; but a cure was effected in little more than two months. In the prurigo of old people generally, Mr. Startin's prescription for external use is a liniment of glycerine and trisnitrate of bismuth or powdered talc, rubbed in with a flesh brush. Dr. Frazer recommends for trial finely powdered camphor mixed with six or eight parts of rice or potato starch, and a small quantity of acetate or carbonate of lead. This is dusted on the skin three or four times a day, its action being aided by calomel ointment. Latterly, Dr. Neligan confined himself almost entirely to chloroform ointment, which seems one of the best, if not the best ever introduced. It is made by mixing half a drachm of chloroform with an ounce of cold cream. I believe this and the following lotion are two of our most valuable remedies.

℞. Hydr. bichlor. gr. iv.; bismuth oxyd. ʒ ss.; acidi hydrocyan. dil. Ph. Lond. ʒ ss.; aq. calcis ad. ℥ viij. M. To be applied warm two or three times daily.

Mr. Balmanno Squire considers that prurigo senilis is always due to pediculi, and we may naturally expect to find that his principal reliance is upon external means. That in some persons pediculi will induce symptoms which might very easily be mistaken for prurigo is possible enough, but that they ever bring on genuine prurigo, a disease in its severer form so generally associated with some deep-seated constitutional disorder, is a very different matter. Mr. Naylor, who thinks the insect cannot produce any form of this complaint, says he has known a very weak nitric acid lotion—half a drachm to eight ounces of water or one of bismuth, a scruple to six ounces of water—prove exceedingly serviceable. He also says that when prurigo is an idiopathic affection the use of chloroform is often of great service, applied either in the form of vapour or of an ointment consisting of equal parts of chloroform and camphor liniment.—*Medical Press and Circular, March* 11, 1868, *p.* 219.

# Materia Medica and Chemistry.

## LIQUID OXYSULPHATE OF IRON.

Dr. J. R. Black says, in the *Lancet and Observer:* "In 1863, an old physician of Tennessee, in return for some civilities, handed me the following *recipe* for what he termed the 'Liquid Oxysulphate of Iron, which he highly lauded, and said that it had been a great favourite with the few physicians who had knowledge of it. Five years' use of it in my practice fully confirms the favourable estimate of its qualities, which it gives me pleasure to communicate and make public.

℞. Ferri sulph., ℥ ij.
Acid nitric, f. ℥ iij.
Aquæ distil, f. ℥ jss. M.

"Rub the sulphate with the acid slowly in a mortar, gradually add the water after the sulphate is all dissolved, and filter through paper. Doses from six to twelve drops, in water or quassia infusion.

"I have found this preparation to be one of singular efficacy, in a majority of cases, where iron is indicated. It is also an excellent appetizer, and the most palatable of all the ferruginous preparations. In the proportion of ℥ jss. of the liquid to ℥ jfs. of water, its taste precisely resembles that of alum. But substituting simple syrup for the water, the flavour is seldom objected to, even by the most fastidious. When thus mixed, the dose is a teaspoonful. Besides, it is cheap, easily made, and, with quinine, makes a beautiful clear solution, and a tonic unsurpassed. Those who will use this preparation once, will never feel like again resorting to the so-called elixirs of iron."

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## IMPURE GLYCERIN.

The presence of oxalic and formic acids is the great cause of irritation in glycerin; these acids are produced by the action of sulphuric acid upon the glycerin, forming the first mentioned acid, and this in turn acts upon the glycerin, giving rise to formic acid. The most reliable test is nitrate of silver. Glycerin which shows no reaction with this salt is considered suitable in all cases, as it indicates not only the presence of chlorine or chlorides, but is, as well, reduced by acids, which may exist in the glycerin.—*Chemical News.*

# Canada Medical Journal.

MONTREAL, AUGUST, 1868.

## LIFE ASSURANCE COMPANIES AND MEDICAL FEES.

The question of medical fees from life assurance corporations has engaged the attention of the British medical public for some years, and so oppressive and unjust were the demands of the companies that the profession were unanimous in refusing to give any information, without the accompanying fee, and also determined in not recommending to their patients the acceptance of a policy in any company but in those who dealt liberally with the profession in paying for the information which they deemed necessary.

It appears the system of procuring information from professional men, gratis, has been adopted by some United States companies who are doing business in Canada. We think it advisable to call the attention of the profession to a series of resolutions which were passed in the year 1849, and which were subscribed to by a number of leading physicians in this city, many of whom are still amongst us. These resolutions supplemented the action of the profession in the mother country, who took up the subject very warmly, and by force of moral suasion obliged the companies to come to terms on this subject. We deem it alone necessary to fairly represent this matter to the companies to induce them for their own safety to adopt the suggestions which these resolutions contain. There can be no doubt of the delicate relative position between a patient and his physician. Circumstances of the most confidential nature are constantly given to the safe keeping of the physician, and no physician can divulge any circumstance entrusted to him without incurring the just odium of his patient and of the community at large.

Competition in life assurance is so keen that assurance companies find it to their advantage to hold out enormous inducements to agents—fifteen and twenty per cent on the amount of premium paid by the assurer goes into the pocket of the agent. It is therefore his object to secure as many applications as possible, but in so doing he does not assume any responsibility. The whole responsibility rests on the medical officer for

the company. In some cases he may feel convinced that although to external appearance the proposer is safely assurable, yet there may be some point in the medical history which requires clearing up before he can give a conscientious statement as to the chances of life. Now in seeking this information we would ask is it for the benefit of the person assuring or for the assurance company? Here is, for instance, a life every way eligible, yet there may exist some obscure feature in the case, some one fact which requires elucidation, and which can alone be obtained from the physician of the party making application. The English companies, when such information is deemed necessary, assume at once the responsibility, and obtain the information they seek, paying the physician his fee for the trouble and for his medical opinion of his own patient. The United States companies, on the contrary, send the applicant with the required paper in his hand and insinuate to the assurer that, inasmuch as it is for his benefit, his doctor ought not to refuse to give the desired information. Thus if the physician refuses he incurs the ill-will of his patient, and if he consents he does so equally, as it is possible that he may have, if a conscientious man, to advise the company of certain facts known alone to him, but which may be prejudicial to the chances of his patient securing a policy.

There is but one way of overcoming this difficulty, and that method is embodied in the resolutions which we publish. The profession individually should be left untrammelled, otherwise their opinion is apt to be biassed. It is not in the nature of things to expect that a professional man will reply to questions which may be damaging to the interests of his patient, and very seriously injure his own prospects of retaining him as his patient, if he knows that the opinion given is first submitted to the inspection of the applicant. Of what use, then, would such a report be to an assurance company, if circumstances are withheld which, if made known, would go far to prevent a policy issuing. The information sought should be strictly between the company and the physician applied to, the answers given should be received by the company in strict confidence, and for this information, the company are bound to pay the same fee which they allow to their own medical referee.

These suggestions have been forced from us in consequence of a circumstance which occurred to us recently. An American company sought to obtain our opinion of the state of health of two of our patients. We refused to reply to the questions, inasmuch as the company refused the customary fee, and furthermore, placed the papers in the hands of the applicants. We were not a little surprised to learn that an opinion had been expressed by two medical gentlemen condemning our action in the premises, and a third

medical man went so far as to fill up the required papers. Here the matter for the present rests, but we certainly hope that a unanimous expression of opinion on this subject will be made by the profession at the meeting which is about to be held in this city. To prove how willing assurance companies are to do what is manifestly right and for their own interests, we may state that a copy of these resolutions were sent by the medical referees to the head office of a large New York life company doing business in Canada, and that the agent received instructions in all cases where it was deemed necessary by the company's officer to obtain the opinion of the private medical adviser of any applicant, the information was to be considered strictly confidential, and furthermore, the customary fee was to be paid by the company. It only requires unanimous action on the part of the profession to maintain our rights, but if there are to be found amongst us members who are willing to submit to a manifest injustice, we cannot wonder at any injustice which may be heaped upon us.—We take the following from the *British American Journal* for the year 1849.

Sir,—I beg to transmit a copy of Resolutions, unanimously passed at a meeting of the medical profession of this city, held, pursuant to notice, on the 16th April, 1849, in reference to life assurance companies.

And have the honour to be,

Sir, your obedient servant,

A. H. David, M.D., Secretary.

Montreal, 18th April, 1849.

The relative position of patient and physician has always been considered, and in truth is, one of peculiar delicacy, as well as of the most confidential nature, and no physician can divulge any circumstance intrusted to his knowledge without incurring the just odium, not only of his patient and of his professional brethren, but also that of the community at large.

*Resolved*, 1. That in the case of a patient referring any assurance company to his former or present medical attendant for his opinion, it being recognized that such medical opinion is sought for by the company, with the concurrence of the patient, all such opinions should be perfectly unbiassed, and the information thus obtained by the company should be considered strictly confidential.

2. That in the opinion of the undersigned, the tendering of a fee, under these circumstances, is but a simple "act of justice" towards the private referee, and as the information thus derived by assurance com-

panics is of the most essential advantage to them, such fee should be paid by the companies at the time of proposing the enquiries, and should be of the same amount as that paid to their own referee.

3. That copies of the foregoing resolutions be transmitted to the agencies of the different assurance companies in this city :

D. Arnoldi, M.D., James Crawford, M.D., George W. Campbell, M.D., Arthur Fisher, M.D., W. Fraser, M.D., Francis Badgley, M.D., L. Boyer, M.D., R. L. MacDonnell, M.D., J. L. Leprohon, M.D., Francis C. T. Arnoldi, M.D., William D'Eschambault, Henry Howard, M.D., A. Hall, M.D., W. E. Scott, M.D., Samuel B. Schmidt, M.D., George D. Gibb, M.D., William Sutherland, M.D., Robert Godfrey, M.D., M. P. Burns, A. H. David, M.D., H. Peltier, M.D., M. McCulloch, M.D., Pierre Davignon, Wolfred Nelson, M.D., A. F. Holmes, M.D., O. T. Bruneau, M.D., L. F. Tavernier, J. G. Bibaud, M.D., A. E. Regnier, J. Emery Coderre, Henry Mount, M.R.C.S.L., Frederick Morson, M.R.C.S.L.

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## THE APPROACHING MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

Within a few days after this number of the Journal reaches our readers, the annual meeting of the " Canadian Medical Association" will take place in Montreal. The importance of this meeting cannot be overestimated. Almost a year ago at the solicitation of the Quebec Medical Society, to the members of which all honour is due, a convention of the medical profession of the Dominion took place at the ancient capital. The meeting was large and respectable, there being representatives from all parts of Canada. It was then determined to form the Canadian Medical Association, and with much enthusiasm and great unanimity the work of organization was commenced under the distinguished presidency of the Hon. Charles Tupper, C.B. The object of the society was forecast by the appointing of committees, to report at the next meeting. These committees were respectively, 1st, " To frame a constitution and by-laws for the government of the association ; " 2nd, " To consider the question of preliminary education ;" 3rd, " To report on such means as will insure a uniform and elevated standard of medical education throughout the Dominion of Canada ;" 4th, To report on the best means of having a uniform system of granting licenses to practice medicine, surgery, &c ;" 5th, " A committee on Statistics and Hygiene ;" 6th, " To draw up a code of medical ethics for the government of the profession." There is very much embraced within the limits of the duties of these committees ;

but we have no doubt each will be duly prepared to render a report at the forth coming meeting.

It is not our intention in this place to offer any opinion or suggestion as to what should be the nature of any one report, but we would venture to express the hope that the individuals composing the committees will approach their work in an exalted spirit of professional candour and mutual esteem. We cannot imagine anything that will be so likely to interfere with a complete development of the Association than a spirit of captiousness, or display of secular feeling, and we are unaware that aught of this nature is to be feared. However, from the very nature of the questions to be reported upon, there will almost necessarily arise some difference of opinion; yet each may state his views with calm dignity, and then let the voice of the majority dispassionately decide what shall be regarded as the wisest and the safest steps to be taken to secure the interest of the whole profession of the Dominion.

It is perhaps a matter of regret that arrangements were not made at the last meeting to secure for the coming one some discussion of a scientific nature with which to occupy a portion of the time. It may not be out of place for us to suggest that it would be desirable that some one or more should come prepared voluntarily to read a paper or open a discussion upon a specified topic.

We are requested to express the hope that members of committees will make it a point to be present on the 31st August, so that their reports may be prepared in time to be presented to the Association immediately after its organization. The profession of Montreal have met and organized committees to look after the entertainment of the associates. So far as arranged it is intended to have a conversazione on the evening of the first day of meeting—and on Friday morning a public breakfast will be given to the Association. At the time we go to press, committees are busy arranging details. An advertisement on our advertising sheet explains the arrangements which the General Secretary, Dr. A. G. Belleau, has made with the various railway and steamboat fares.

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## THE SALARY OF THE MEDICAL HEALTH OFFICERS FOR THE CITY OF TORONTO.

We have great respect for dignitaries, even for city Aldermen, and desire to speak of them with due regard; but it is not easy to do so when we take notice of the proceedings of the City Council of Toronto, at a recent meeting, when considering the question of estimates. There

are appointed for the city two officers of health, medical gentlemen. The report for their salary was to allow each $600 per annum. Two aldermen, who probably have no idea of the meaning of the word hygiene, strongly objected. "Their services were not worth the money; there was no extraordinary sickness in the city; there were plenty of doctors beside them, and to grant this amount was simply to throw the money away"; which may be interpreted as follows: there is no extraordinary sickness in the city, because the health officers have, by their precautionary measures, prevented it, and there were plenty of doctors beside them, having nothing to do in consequence! Consequently their services are not worth the money. How logical! not to say sensible. The mayor, with a correct appreciation of the importance of the duty of these officers, said "they had saved thousands of dollars to the city, and were most attentive to the sick and the poor." Another alderman "moved that the salaries be reduced to $300 each, which was carried." We would not say to the gentlemen concerned, refuse such an inadequate compensation for your time, and employment of scientific knowledge; but we hope to see the time when such advice would be just. At present it may be well to continue to discharge your duties, even as you have done, and witness the fruit of your labour in the fact complained of by these two pennywise aldermen, that "there was no extraordinary sickness in the city." The time will come, and we trust shortly, when the public will more fully understand the importance of availing themselves of scientific knowledge to prevent disease.

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## ANNUAL CONVENTION OF THE NOVA SCOTIA MEDICAL SOCIETY.

The annual meeting of the Nova Scotia Medical Society was held at Pictou on the twenty-first day of July, when the following office-bearers were elected, and delegates to the Canadian Medical Convention chosen in addition to those chosen last year:—

President, Dr. B. de W. Fraser; Vice Presidents, Presidents of Co. Societies; Treasurer, Dr. Cowie; Secretary, Dr. Rigby; Cor. Secretary Dr. F. F. Garvie; Council, Dr. Gossip, Dr. D. McN. Parker, Dr. George Johnston, Dr. J. B. Garvie, The Sec'y. "ex officio."

Drs. Moren, Wickwire, and T. R. Almon were chosen as delegates to represent the city and county of Halifax at the forthcoming Canadian Medical Convention, and Drs. George Johnston (Pictou), Hamilton (Cornwallis), and Cameron, (Baddeck, C.B.), were chosen to represent the rest of the Province.

At an adjourned meeting held on the twenty-second day of July the following resolutions were adopted:

Moved by Dr. Wickwire (Halifax), seconded by Dr. McLean, (Colchester):

*Resolved*, That a Committee of five be appointed to revise the Constitution and By-laws of the Nova Scotia Medical Society, and to report at the next annual meeting.

Members elected on the Committee were Drs. Rigby (Halifax), McLean (Colchester), Fullerton (Wilmot), Christie (Pictou), Gossip (Halifax).

Moved by Dr. Christie (Pictou), seconded by Dr. Cowie (Halifax):

*Resolved*, That a committee of three be appointed to report on the general advancement of medicine, surgery, and obstetrics, and to include all cases illustrative of the subjects which they can procure; said report to be presented at the next annual meeting.

Members elected on the committee were Drs. S. Muir (Truro), D. McN. Parker (Halifax), Stephen Dodge (Kentville).

Moved by Dr. Moren (Halifax), seconded by Dr. McLean (Colchester):

*Whereas*, a periodical called the "Provincial Medical Journal" has been published in Halifax, and whereas paragraphs have appeared in various newspapers of Halifax stating that it was published under the auspices of the Nova Scotia Medical Society;

*Resolved*, That this Society totally ignores all knowledge of or connection with the "Provincial Medical Journal."

Moved by Dr. McLean (Colchester), seconded by Dr. MacDonald (Hopewell):

*Whereas*, The Medical School lately established in Halifax does not meet with the approbation of this Society;

*Resolved*, That this Society has no connection with and does not recognize the School of Medicine of Dalhousie College.

Several other resolutions of minor importance were adopted, and it was decided that the next annual meeting of the Society should be held at Windsor (N. S.) on the third, Tuesday of July, 1869.

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## MEDICAL ASSOCIATION OF THE DIVISION OF GORE, ONT.

The semi-annual meeting of the Medical Association of the Division of "Gore and Thames," took place at Simcoe, Ont., on Wednesday, 15th July, and was in all respects one of the most successful meetings yet held. There were a large number of medical men present from all parts of the Division. The President, Dr. Bingham, read a very able address on the position and prospects of the profession, and the duty they, as members of this Association, owe to the profession by strictly carrying out the

code of medical ethics, by guarding the rights of the profession, &c. The address was ordered to be printed.

Letters of apology were then read from Dr. Workman, Superintendent of the Lunatic Asylum, Toronto, Dr. Covernton, Professors Berryman, Reid, &c., regretting their inability to be present.

Dr. Philip, of Plattsville, on behalf of a committee consisting of himself and Dr. Bingham, of Ayr, read a very able and interesting report upon "the use of the alkaline and earthy sulphites in the treatment of zymotic diseases." At the last meeting of the Association these gentlemen were appointed to draw up a report upon the subject.

On motion the thanks of the Association were given to Drs. Bingham and Philip, for their comprehensive report, and it was requested that it should be forwarded to the *Canada Medical Journal* for publication.

Dr. Turquand, the member of the Council, then addressed the Association, at length, giving an account of his stewardship as their representative, and a full synopsis of matters which had come before the Council at its last annual meeting, and concluded a very able and interesting address by thanking his medical friends for the confidence which they had always reposed in him since his election.

Dr. Clark, of Simcoe, on behalf of Dr. Covernton, who was unavoidably absent, read a very elaborate and carefully prepared paper on the subject of "cholera infantum." He reviewed its history and pointed out the best methods for its prevention and cure. On motion, the paper was ordered to be published.

It was moved by Dr. Cottle, and seconded by Dr. Bowlby: That a delegate be sent to represent this Society at the annual meeting of the Canadian Medical Association which meets in Montreal in September next. — Carried.

Dr. D. Clark, of Princeton, was appointed to report at the next meeting on the epidemic fevers of Ontario. He then moved, seconded by Dr. Bowlby: That a committee be appointed consisting of Drs. Covernton, Hayes and Clark (Simcoe), to report at our next meeting on the crime of *produced abortion*.—Carried.

In the evening, the Norfolk branch of the Association entertained their brethren from a distance to a grand banquet, which was a very decided success.

## UNIVERSITY OF MICHIGAN.

It will be observed by the following extract from the annual circular of the University of Michigan that it has successfully resisted the action of the State Legislature who granted aid to the University, conditionally on the establishment of a Professorship of Homœopathy. We congratu-

late the University on the ruling of the Supreme Court of the State. It is a lesson to ourselves to be ever wary and watchful, as legislative action may at any time be brought to bear in the same direction as touching our own educational institutions.

"In consequence of an Act of the Legislature of Michigan at its last session, granting aid to the University on the condition that a Professor of Homœopathy should be introduced into the medical department, much agitation and annoyance have been experienced by its friends; but the Faculty are now happy to announce to the medical profession and all the friends of legitimate medicine, that the Board of Regents, who control the University, at a recent meeting, resolved, with but a single dissenting vote, that under no circumstances should such professor be introduced into the Medical College at Ann Arbor; and the Supreme Court of the State having since decided that all previous action of the Board making provision for the establishment of a school of homœopathy at another place is not a compliance with the law, and such action thus becoming null and void, the Faculty are enabled to assure the profession that the *Medical Department of the University of Michigan is entirely free from the remotest connexion with homœopathy*—that its curriculum will not be changed, and that it will remain, as heretofore, unaffected by any form of irregular teaching or practice.

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## RECREATION FOR THE PHYSICIAN.

"It is rather a curious fact that our profession, while so earnestly and constantly preaching to their patients the benefits growing out of rest, change of scene, and pleasurable exercise, should be so neglectful of their own health. Medical men need relaxation as much if not more than do the clergymen, and they should not lose any opportunity, at least once a year, of running out of town for a good old-fashioned rural vacation. There are too many among us who are actually below the par of good health, whose need for just such a recreation is imperative. There is a necessity for such to be shut out for a time from their little world of patients, to be able to sleep far away from the startling sound of the midnight bell, and to enjoy that refreshment which regular hours, regular meals, and regular rest can alone give. We hope that many of our readers will be able to enjoy the tempting opportunities which the present summer may afford."

The above paragraph, we copy from a recent number of the New York *Medical Record*, and we most heartily endorse the sentiments expressed. No class of men are more the slaves of the public than the medi-

cal profession. Early and late, rain or sunshine, without a murmur we are expected to answer every demand made upon us for professional assistance. We must not even stop to inquire whether our services are to be remunerated, without being put down as worse than brutes, and our names threatened to be published broadcast over the land. No class of men, therefore, stand more in need of relaxation than we do, and yet how begrudgingly a holiday is granted. Who is to blame for this? We can but answer that we think it is ourselves. In Canada at least, the physician, until the last few years, has toiled on year after year, until his hair has turned gray in the service, and never thought of seeking that relaxation which he so often prescribes for others, who in reality need it less than himself. Educated therefore as it were, to have the physician never away from his work, patients are apt to, and do grumble if we absent ourselves, only for a few days. This is wrong, nay, more, it is unjust, and if it should continue we have ourselves to blame. It may be a satisfaction to our patients to be able to find us day after day, and year in and year out whenever our services are required, but to our families it is far from a satisfaction to see our health failing simply from the want of a little relaxation. A little courtesy amongst the profession, and all could without the slightest difficulty get a holiday every year or two.

## TO CORRESPONDENTS.

Dr. Philip, Plattsville, Ontario.—Your letter of 4th August with list of new subscribers and their subscriptions in advance, has been received. Receipts will be enclosed to each. We only wish a few others of our subscribers would imitate your zeal, and obtain for us new subscribers. You have our thanks. We hope you will continue to use your influence in our favour.

Dr. A. Bethune, Glanford, Ont.—Your communication is to hand, and will appear in the September number.

## A GOOD JOKE.

The "retired physician whose sands of life are nearly run out," and who was recently spoken of among the "Swindlers of New York," in the *Evening Post*, had a clever practical joke played upon him some time ago. A wag sent him a bag of sand to replenish his wasted store. Those who have had the benefit of his prescriptions may be glad to know of this pleasant assistance rendered the benevolent old gentleman, to enable him so easily to prolong his life and labours.

[The re-invigorated physician has since been married!]—*Philadelphia Medical and Surgical Reporter.*

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Case of Frost Bite of both Feet, resulting in spontaneous separation of right foot at tarso-metatarsal joint, and amputation of left foot near same joint.* By R. W. JACKSON, F.R.C.S.I., Surgeon to the 100th Royal Canadian Regiment.

CASE I.

J. B., ætat 28 years, service 9 years—has been several times in hospital, since enlistment, with trifling ailments, except in March, 1867, when he met with a severe injury, having fallen from a railway car when attempting to leave while the train was moving, for the purpose of buying whiskey, to which he has always been too partial, and was probably under the influence of drink at the time. On this occasion he suffered a compound fracture of left ramus of the lower jaw, had six teeth knocked out, and was under treatment after the accident for one hundred days.

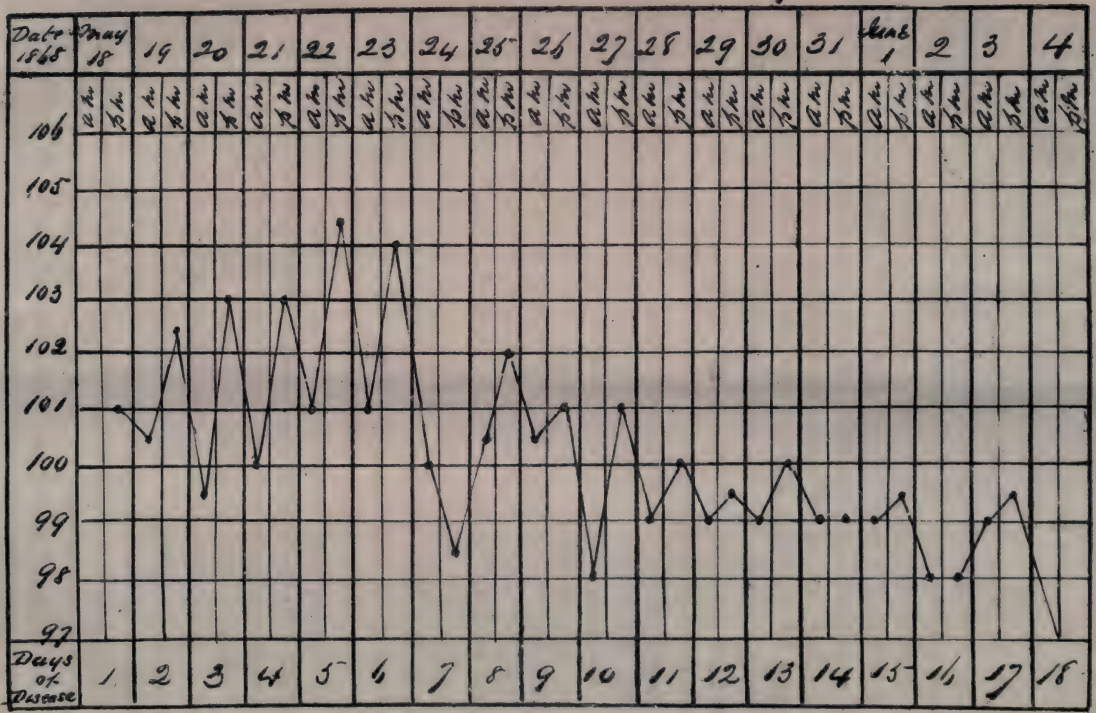
Was brought to the Regimental Hospital 26th of December, 1867, having been absent from the Regiment, without leave, since the evening of the 21st. From what could be ascertained from him he left Montreal the afternoon of the 21st, walked about twenty-four miles into the country, got drunk and slept out all night in the intense cold. His account how he spent the time until the morning of the 25th cannot be depended on. The last mentioned day he gave himself up to a look-out party.

State on admission. Toes and fore part of both feet severely frost-bitten, the skin over affected parts livid, insensible, perfectly cold; serum exuding from cracks in the skin; the portions of feet not frost-bitten, as well as ankles, were swollen and red; tongue clean, and pulse 96.

As there was no chance of restoring the circulation in the frost-bitten parts, cold poultices were applied, and opium in grain doses ordered twice daily.

In the evening the pain in living portions of feet was more intense, a quantity of ichorous discharge had escaped, and the frost-bitten parts were white and shrivelled. He slept none the night after admission, and for several days the pain in the feet where the living and dead structures met was agonizing, at the same time his general health was little affected. Five days after admission the discharge became very fetid. On Jan. 4th, fourteen days in hospital, the line of demarcation was distinct in both feet, at the same time vesications with superficial ulcers appeared on both heels. A consultation was now held as to the propriety of operative interference; Surgeons Major Young and Smith were present, and Dr. Fenwick kindly gave the benefit of his advice on the occasion. Dr. Fowle Smith had an extensive experience in cases of frost-bite in the Crimea, and his opinion was strongly in favour of non-interference. This opinion was agreed to, and the sequel proves the practice was correct. From this date a solution of carbolic acid was applied to the feet, and had the effect of correcting the fetid discharge. The ulceration gradually extended in depth, and on the 8th April, seventy-six days after admission, the right foot sloughed off at the tarso-metatarsal joint—at same date the line of demarcation had extended through the soft parts of the left foot, and through the tarso-metatarsal joint of great toe, and obliquely across shafts of the other metatarsal bones, the proximal joints being firmly attached to stump. On May the 5th, as it was palpable that it would be a tedious affair to wait for erosion of the metatarsal bones to take place, Hey's operation was suggested and carried out. It was found on removing the metatarsal bones that sufficient soft structures did not remain to furnish a tolerable covering for the stump; the flaps were therefore dissected back and the tarsal bones sawn across about their centres; the flap was then brought together with metallic sutures;—a few vessels required to be tied. Troublesome oozing of blood continued for several hours, controlled at last by pressure and perchloride of iron. There was considerable constitutional disturbance after the operation; he had marked rigors and general fever; there was also subsequent inflammation of lymphatics of left leg, but no suppuration in glands. The wound did not unite by the first intention; this could not have been hoped for in consequence of the chronic state of inflammation the soft parts near face of stump were in. He commenced to mend and steadily improved from the 22nd May. A very small point of ulceration now exists on left stump; the sore on right is considerably larger. He can walk from one ward to another with the help of a stick. The left stump is more rounded and the bones better protected by soft parts than the right; on the latter there is considerable tension of the skin.

# Thermometric Temperature of L. 13



As to the propriety of operative interference in cases of frost-bite, the views of authorities differ. In a quotation from Macleod's Surgery of Crimean War, in Holmes' system, it appears that medical officers gave up all kinds of interference, the most trifling operations in dividing skin, tendon, &c., being fraught with danger during the campaign. Mr. Syme considers it best to steer a middle course (Principles of Surgery, page 35), "and to avoid interference until the soft parts are nearly detached." Erichsen's opinion coincides with Mr. Syme's; he states amputation should be performed when the line of separation is fully formed. In J. B's. case, had amputation been performed when the line of separation first became distinct, the edematous condition of tissues from which the flaps were to be formed would have rendered Syme's, or Chopart's at most, the only feasible operation; nature, more conservative, saved an additional joint. However, as soon as the line of demarcation has reached the bone, the sooner amputation is performed the better, as, while erosion of the bone is going on, the chronic inflammation and ulceration in the neighbouring soft parts greatly deteriorate the tissues out of which the flaps have to be formed.

A diagram of his temperature subsequent to the amputation is annexed.

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*Resection of Elbow Joint after Compound Comminuted Fracture of Lower End of Humerus.* By R. W. JACKSON, F.R.C.S.I., &c. Reported by JAMES THOMPSON, L.R.C.S.E., Assistant Surgeon 100th Regt.

CASE II.

Private J. D.—100th Regiment of Foot, aged 28 years, 10 years in the service—had been drinking and fighting on the evening of the 15th May, in Water street, and states that he was pushed over the pathway, falling to the ground between 10 and 12 feet. He thus received an injury of right arm. I saw him in hospital at eleven o'clock p.m. same night. On examining the arm, two small transverse penetrating wounds were found on the posterior surface of right elbow joint, just above olecranon. These communicated with the joint and the comminuted fragments of the lower end of humerus were felt by the finger in the wound. The swelling was trifling, but there was considerable oozing of blood. Dr. Jackson decided to stuff the wounds with lint until the P. M. O. could be referred to. Next morning, after consultation with Surgeon Major Young, 60th Rifles, and Dr. Armstrong, 1 Batt. 16th, &c., it was agreed to resect the joint, which Dr. Jackson did, after the patient had been put under the influence of chloroform, by making a longitudi-

nal incision on the posterior surface of the joint, about 6 inches in length, carefully dissecting out the fragments of the humerus and sawing off the pointed end of its shaft, which had been denuded of periosteum, thus removing, in all, about 2½ inches of this bone. The projecting portion of the olecranon was then sawn off to the level of the articulating surface of the radius. No vessels required to be tied; the wound was brought together by the interrupted metallic suture, and the arm sustained at right angles by a figure of 8 bandage round the joint, the fore arm being suspended from the neck in a gutta percha splint. The transverse wound, received at the time of the injury, afforded egress for any discharge, &c.

He had a soothing draught at night, and rested well. Next morning the pulse was 120, the tongue coated and the upper arm somewhat swollen; but he took his food well, viz., milk and beef tea. By the 21st, *i. e.* five and a half days after the accident, and five from the resection, the fever had gone and the swelling greatly diminished; slight healthy suppuration from the original wound. It was dressed with the carbolic acid lotion.

On the 27th the bandage was undone. Original wound now granulating kindly. That made by the surgeon had united throughout by the first intention. No swelling remains save that arising from the callus around the bones.

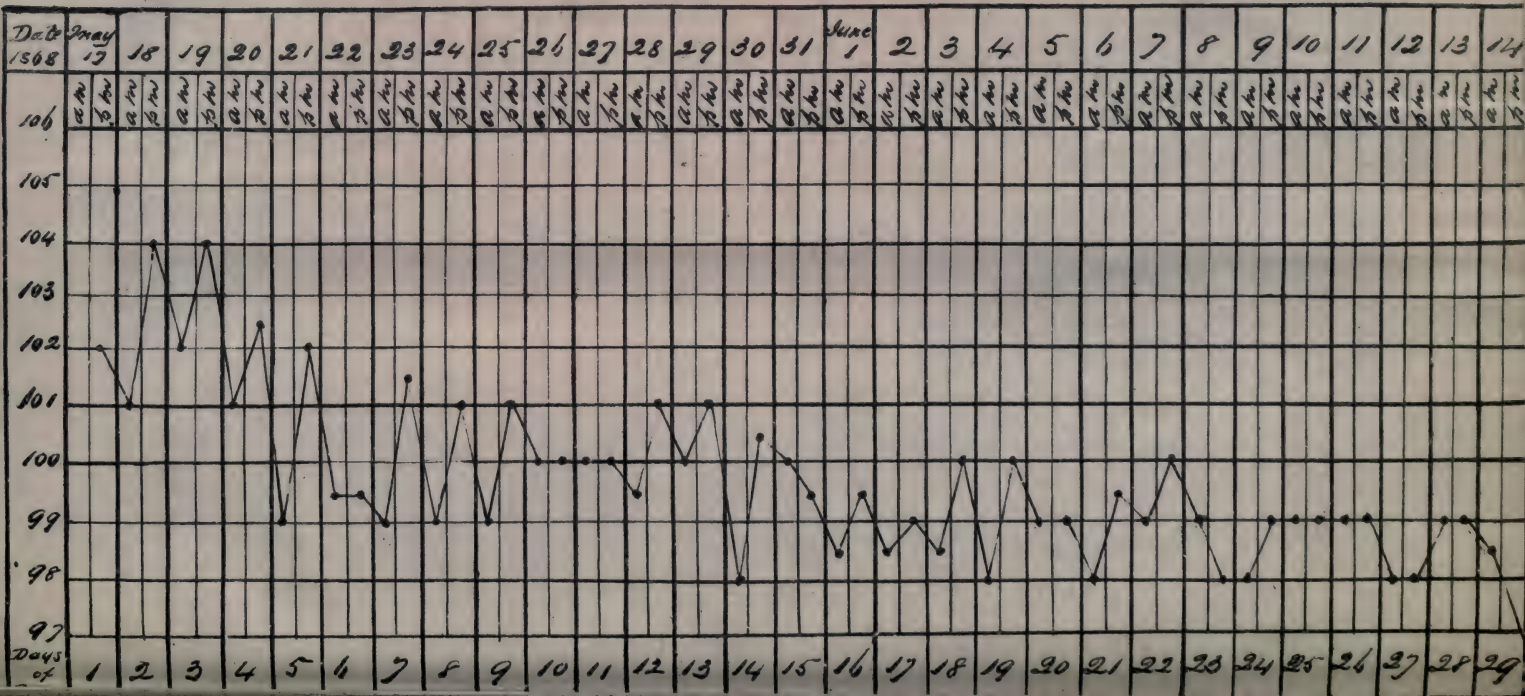
He had now full diet, with a pint of porter, and was able to be up. On the 12th of June the wound had quite cicatrized; can flex and extend the joint by laying hold of the hand, without pain.

By the end of June he was able to rotate the fore-arm slightly, and to flex the joint almost completely; owing, however, to the original fracture having extended beyond the tuberosities of the humerus, thus necessitating their complete removal, the joint is likely to remain comparatively weak. The hand, however, is very useful. He is, of course, unfit for further service in the army.

Remarks. — From the situation of the injury and the comminuted state of the fragments of condyles of humerus, it appears probable that the fracture was caused by direct violence; it is difficult to understand how a fracture of this kind could result from a fall, and the olecranon escape uninjured. J. D. states his companions had a slung shot. A blow with a weapon of this sort would be likely to result in a wound and fracture such as we found. The blow may have been struck as he raised his arm to defend his head.

The longitudinal incision was preferred in this case, as the wounds received in the first instance afforded a ready means of exit for blood or other discharges subsequent to the operation.

# Therinometric Temperature of Pvt. J. D



The fact that so considerable a portion of the shaft of the humerus was implicated was most unfavourable to the ultimate prospect of a useful arm, as a small cylinder of bone at the point where the humerus was divided had to become united with the broad surfaces, resulting from a section of the olecranon, and also with the head of radius, the latter intact.

M. J. Bell, in a recent manual on operations of surgery, page 103, classes among cases requiring Excision of Elbow Joint, "those with wounds of elbow penetrating joint, especially when the wound of the joint is small and punctured." He further states "that in excision of the elbow joint, more than in any other joint, complete excision is absolutely necessary, any portions of the articular surfaces being left prove a source of unfavourable result." He does not state whether he intends the above to refer to cases where the operation is performed for chronic diseases affecting joints, or for accidents, gunshot or otherwise. J. D.'s case would lead to the inference that Mr. Bell's rule will admit of exception. In our operation there was necessarily so extensive a removal of shaft of humerus that we did not consider it expedient to remove head of radius, and only removed a portion of olecranon. The rapid union of incision through soft parts proves that the articulating surfaces of head of radius and of portion of sigmoid notch did not interfere, in any respect, with the healing process. Also, there have since then been no symptoms of sinuses or other untoward result.

A diegram of J. D.'s temperature after the operation is appended.

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*An Essay on the Contagion, Infection, Portability, and Communicability of the Asiatic Cholera in its relations to Quarantine; with a brief History of its Origin and Course in Canada, from* 1832. By W. MARSDEN, A.M., M.D., ex-President and Governor of the College of Physicians and Surgeons, Canada East; Honorary Fellow Medico-Botanical Society, London; Corresponding Fellow Medical Society, London; Honorary Fellow Montreal Pathological Society; Honorary Fellow Berkshire Medical Institute and Lyceum Natural History; Honorary Fellow Medico-Chirurgical Society, New York; Member by Invitation of the American Medical Association, &c., &c., &c.

*(Continued from our last.)*

I may here ask to be excused for a slight digression of a personal nature.

For upwards of twenty years previous to this invasion I had watched the course of the pestilence with marked attention, and tracked its devious

wanderings with intense interest. Finding that the Quarantine regulations were of the most imperfect kind, and that their execution was a mere costly form, and having written much on the subject and remonstrated with the authorities in vain, I finally addressed a memorial to the Provincial Executive, praying for the appointment of a commission to investigate and report upon the introduction of Asiatic cholera into Canada in 1854, pledging myself to prove to the satisfaction of such commission, if appointed, "*that Asiatic cholera had been imported into Canada, and had been transmitted throughout the country, by and through persons infected at the Grosse Isle Quarantine Station.* This apparently bold assertion quite took the government by surprise, and created much debate and newspaper discussion at the time. It, however, had the desired effect, although my representations were ridiculed as preposterous, and the public expectation was that the result of the enquiry would have been my utter discomfiture.

Three gentlemen were named a commission to investigate and report, and were empowered to examine witnesses *under oath.* It was composed of two medical gentlemen of high professional standing, who were avowed *non-contagionists*, and a distinguished lawyer, now a judge. They entered zealously upon the discharge of their duties, although commissioned so late in the season that a large number of the most important witnesses had left the Province. Their report more than confirmed the charges which I had brought against the Quarantine authorities in every particular.

That document is, perhaps, one of the most important that has ever been drawn up in any country or any age, and ought long since to have been published. Although it is usual to print parliamentary reports in Canada, it seems strange that a report of so much importance as the one in question should have been an exception to this rule, and not have seen the light of day, outside of the executive walls, until January, 1867, when, through the kindness of the Honorable the Minister of Agriculture and Emigration, the late D'Arcy McGee, I was put in possession of a *manuscript* copy. During the past twelve years I had asked, times without number, both directly of the executive, and indirectly through the press, for its publication, but in vain.

The most salient and important facts connected with the outbreak of Asiatic cholera in 1854, as established by this report, are briefly these: The ship "Glenmanna," from Liverpool, arrived at the Quarantine Station on the fifteenth of June, having thrown forty-five passengers overboard on the voyage, who had died of Asiatic cholera. The "John Howell," another passenger vessel from Liverpool, arrived at the station

on the same day, having had no cholera on board. The passengers from the two vessels were landed at the same moment of time, in fact together; and being mostly Germans, Prussians, &c., they intermingled freely, and enjoyed uninterrupted intercourse with each other. During their stay at the Quarantine Station, one of the passengers of the "Glenmanna" died of cholera, and yet the passengers of both these vessels were discharged from Quarantine, and allowed to proceed to Quebec without further detention.—In five days after the landing of the passengers from the first cholera ship at the Quarantine Station, the first case of Asiatic cholera in Canada, in 1854, broke out at Quebec in the person of Lang Lorts, a German, who had been a passenger in the "Glenmanna" cholera ship. He was removed to the marine and emigrant hospital, and on the same day, the twentieth of June, nine other cases were admitted to the same establishment, all belonging to the ill-fated ship "John Howell," which had crossed the ocean and arrived at the Quarantine Station in perfect health, there to be infected and scourged by the pestilence.

Of these ten cases, the first ten admitted to hospital, or known to exist, eight died in periods varying from ten hours to thirteen days. Their names, which I copy from the hospital register in the order of admission, are as follows: Lang Lorts, aged thirty-five years, of the "Glenmanna," and Peter Pritner, aged twenty-four years; Hans Kraut, twenty-four years; Mary Susan Jonay, thirty-two years; Matias Jonay, six months; John Pritner, nineteen years; Ann Maria Pritner, sixty years; John Dousteler, thirty years; Frederick Schultz, thirty years; and Francisco Stasebourk, forty-two years, of the "John Howell."

The infectious character of the disease here shows itself again. Of the above nine persons, three were members of one family, one of whom died in ten hours, and two others are members of another family, a mother and a child. Of the first fifty cases admitted to the cholera hospital this year, nineteen were from the "John Howell."

The disease soon spread to the citizens. The first case among the military occurred on the twenty-fifth of June in a soldier of the 66th Regiment, who had been on duty at the Queen's Store, in Champlain street, which is often the *nidus* of epidemic diseases, being filled with low groggeries and taverns, to which sailors, soldiers and the poorer class of emigrants resort. He was removed to the regimental hospital, and died in a few hours.

The 71st Regiment, which was quartered in the lofty citadel of Quebec, suffered very little from cholera, only one death occurring during the season. The troops were confined to the citadel except when on duty, which, on the principle of non-intercourse with the sick, will account

for the exemption of this regiment from disease as compared with the 66th Regiment, which was quartered at the Jesuits' Barracks in the heart of the city, and lost twelve men out of one hundred and thirty-one, attacked with colic, diarrhœa and cholera.

The following are among the replies to my circular addressed to the members of the medical profession of the United States, asking for facts tending to establish the infectious character of the cholera.

N. Roe Bradner, M.D., assistant physician at the Seaman's Retreat, Staten Island, furnished me the following facts under date of eighteenth of February, 1867 : " During the prevalence of cholera in this port last summer, while something over five hundred cases of cholera were treated on board the Quarantine ships, very few cases occurred on shore. We had, however, some cases at the Retreat, and the one which I report seems to be a striking proof of the communicability of cholera. Case C.B., aged twenty-six, a native of England and a sailor by occupation, was admitted to the Retreat on the twentieth of July, 1866. On the evening of the seventh of August, then a convalescent from secondary syphilis, and complaining of no intestinal disorder whatever, he was detached to watch and attend a patient suffering with cholera. On the morning of the eighth he was seized with cholera and died in about twelve hours."

Precisely similar circumstances attended the admission of cases of Asiatic cholera into the Marine and Emigrant Hospital at Quebec, in 1854, as well as at Sunderland, in England, in 1831.

Dr. Guyon, a distinguished physician at Vienna, states that, " the patients in two wards of the Hospital for clinical instruction, were infected by a cholera patient who was admitted into these wards; and Dr. Jhanichen, physician to the Czar of Russia, attributes the continuance of cholera in Moscow, (from the 20th September, 1830, to the following month of March, despite the cold weather) to the fact that the disease was fed in the hospital by the admission of new cases, not cholera" ; and he further adds· " that there sickened between thirty and forty per cent. of persons, who had hospital duty to perform, including physicians, nurses, &c., while of the whole population of the city not more than three per cent. took the disease."

Dr. C. D. Jackson writes as follows :

" On the authority of Dr. W. R. McKee, a resident practitioner of this place, in good standing, I transmit you the following statement. About the twenty-fifth of June, 1833, cholera first appeared in Lancaster, Garrard Co., Ky., a village then containing some five hundred to six hundred inhabitants. There was no cholera nearer than Lexington, thirty miles distant, where it was prevailing. On the evening of a warm

sultry day referred to, a waggon laden with dry goods was received by Mr. Clarke, a merchant of the place. They were unloaded by himself, the negro driver "Daniel," and another negro, "Bill." Within twenty-four hours the whole three died of cholera, and within the next twenty-four hours there were eleven other deaths in the town. The disease spread rapidly and fearfully, and the inhabitants still living describe the mortality as having been greater than in any other place in central Kentucky.

Doctor J. M. Jackson, of Danville, Kentucky, says the first cases of cholera were in 1833, in the persons of five negroes, wagon drivers, who were engaged in hauling "cotton bagging" to Louisville, Kentucky, and returning with dry goods. They were in the employ of Rice & Co. There was then no cholera nearer than Louisville.

Dr. Sweeny, now in Lincoln county, Kentucky, says that in 1849 there was no cholera in Rockcastle county, and none nearer than Louisville, Kentucky, one hundred to one hundred and ten miles distant. A citizen returned from Louisville and was seized with cholera, and died, as did some of the neighbours who attended him, until there were nine deaths in all. So struck were the people with the conviction of the contagiousness of the disease that no communication could be induced between the sick and healthy.

Colonel J. Warren Grigsley, of Lincoln county, says that in 1849 the first case of cholera occurred at Huntersville, Lincoln county, at the village hotel, but where the patient came from he does not know. The next two cases occurred in two families, each living four or five miles from Huntersville, in different directions. It was on Saturday that the case occurred at Huntersville at the hotel. On that night, as was the custom, two negro servants belonging to the hotel, went each to his wife's house and remained over Sunday. Their wives were the two victims just alluded to.

Doctor Franklin Hinkle, of Marietta, Pa., states that he has attended two epidemics in his district in 1849 and 1854, and in both instances cholera could be traced to infection by persons coming from rail and canal. In 1849 there were eighty deaths from the disease.

J. Parsons, M.D., of Mount Pleasant, Kansas, writes as follows: "Each case of Asiatic cholera that occurred in Kansas last year, was traceable to infection, directly or indirectly. I have just discharged *two* cholera patients, who became infected from the baggage of cholera patients who died last summer, and whose effects were stowed away until this winter, when the cupidity of two Dutch people led them to grief. Not many cases occurred here last year, but nearly all terminated fatally."

Doctor Goldstone, of Cobourg, Lake Ontario, states that during the

prevalence of cholera in that city, he engaged two nurses expressly for cholera cases, a man and a woman, to whom he paid four dollars a day each. They both took the disease and died of it.

I could go on citing cases similar to the foregoing to any extent, but as the report of the cholera commissioners, above referred to, gives a number of well-marked cases in support of the doctrine of contagion, I will allow them here to speak for themselves. They ask these two questions:—

1st. Is Asiatic cholera epidemic?

2nd. Is Asiatic cholera contagious?

To the first interrogatory they give a qualified negative supported by striking facts and sound reasoning.

To the query, is cholera a contagious disease, they say that they have authorities in support of the contagious principle of Asiatic cholera as high as those cited in favour of an epidemic influence, resulting from a close and searching enquiry into the character of the disease.

In alluding to the importation of cholera by ships, they say: "We find in Doctors Baby and Gulls' valuable report, the fact that, in those ports in which the epidemics of cholera first appeared, the outbreak of the disease in so large a proportion of the instances followed immediately upon the entrance of ships thus infected, that even did this fact stand alone, it could not, without much hesitation, be regarded as the result of mere coincidence. Further, it is a remarkable fact that the "Carricks" arrived at the Quarantine Station of Quebec, in 1832, just five days before the disease appeared in that city; and again that, in 1848, the outbreak of cholera in the Quarantine Station of New York, and that at New Orleans, should have followed immediately on the arrival of infected ships. The hypothesis of accidental coincidence is indeed the less admissible in the latter cases, since the disease appeared some months sooner than it might have been expected according to its usual rate of travelling, or according to the much longer time that elapsed between its appearance in England in 1831, and its outbreak in Canada in 1832.

A further fact corroborating the belief that the outbreak of cholera in the several ports of England and America was not independent of the arrival of ships coming from infected countries, or having infected persons on board, is, that in several instances, namely, in London, in Belfast, and in New York, a nearer connexion can be traced between the persons brought by the infected vessels and the residents first attacked.

At New York the facts are of a more striking character. Nothing like cholera existed at Staten Island at the time of the arrival of the packet ship "New York." When her passengers were removed to the public

stores, they were occupied by about seventy persons, who had just recovered from other diseases. One of those, a man just recovering from a fractured patella, assisted in the removal of the patients. This was on Sunday, the second of December. On the Wednesday following he was attacked with violent symptoms of cholera, and died the same day. How like is this case to that of C. B., reported by Dr. Bradner this year at the Seaman's Retreat. A woman who had been a nurse, without having any communication with the people, but occupying a room in the same buildings, was attacked and died the same day with all the symptoms of Asiatic cholera. A man who had been discharged, and gone to the city of New York on Monday, and had remained a little over a day in the same inclosure, was returned from the city as a case of cholera, and died the same day. On perceiving the communication of the disease to the convalescents, Dr. Whiting immediately sent them away, and distributed them through the other hospitals, since which three others have been attacked, two of whom have died, but none other than those first exposed at the public stores have been affected. These had been inmates of the hospital for weeks, were ready to be discharged, and had but a limited exposure of forty-eight hours to the influence of the disease. To make the evidence of communication of the disease by human intercourse complete in this case, it is only necessary to add that the disease had appeared in the packet ship "New York" while at sea, six days before it came to anchor at the Quarantine Station, and eleven days before the first of the convalescents in the hospital there was attacked. It surely cannot be questioned that in this instance the ship conveyed the infection. It cannot be believed that the outbreak in the ship at sea, and the subsequent appearance of the disease among persons on shore who were brought into contact or proximity with the sick landed from this ship, *and among no others* (although a large and very populous city was close at hand), were mere accidental coincidences, the result of a poison in the air, or an atmospheric influence affecting the ship at sea, and some days afterwards, by chance singling out a few persons at the very Quarantine Station to which the ship was bending its course, while as yet no other case of the disease had occurred on the whole continent of America.

In support of the contagiousness of the disease we may here further refer to the deposition of Dr. Billings of the city of Hamilton, Canada West. He says: "Mrs. Conway lost her child from cholera. Becoming alarmed she left the city and went to her brother's house, eight miles from town, in the village of Flamborough. She died of cholera twenty-four hours after her arrival. The locality where she went is particularly healthy; the brother who was a farmer, died of the disease. Two or three

days after, her mother and her brother's child died. Several neighbours who visited them during the sickness, or attended the funerals, took the disease, and altogether nine persons died. There was no cholera in that locality prior to the above mentioned occurrence.

In the replies of Dr. Godfrey, of Montreal, in answer to our circular letter, we find the following important communication bearing on the contagious character of the disease. I believe that the Asiatic cholera is as much contagious as typhus fever or as several other contagious diseases. I believe so from the fact that I have seen persons come from a district where there had never been cholera, to attend funerals, or the markets; and I have known them attacked with the disease on their return home. I distinctly remember one case, that of a man who resided about three miles from town, in a village that had not been visited by the epidemic. He came to an infected district to attend the funeral of a friend. The following day he was suddenly attacked with vomiting and purging; in two days after, his eldest daughter, a woman aged about twenty-five, was attacked, then the next daughter; in a day or two after, his wife was seized also, and his three younger children, making in all, seven persons in one cottage. They had all been in good health previous to the disease appearing among them. Their house had been a pattern of neatness, and no case had occurred in the village before or since.

"About the same period an intelligent woman came to my surgery with an infant. On examining it I pronounced it a case of cholera, treated it, and it recovered. On the following morning I was sent for hurriedly to see the mother. She was very ill with diarrhœa, but recovered. Becoming very much alarmed, she went to the country about thirty miles from town, taking her five children with her. After she had been about a week with her relations, the cholera appeared and took off her four eldest children, her brother, sister, and two medical men, and some of their neighbours that had been attending them."

*(To be continued.)*

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*Case of acute Tuberculosis.* By J. M. DRAKE, M.D., Professor of Clinical Medicine, McGill University. Reported by GEORGE ROSS, M.D., House Surgeon, Montreal Hospital.

*John Naismith*—Mate of ship Roseneath—was admitted into the Montreal General Hospital, on the 16th June, 1868. He had been in somewhat delicate health for two years past, but had never ceased his ordinary avocations for a single day. Three weeks ago he was seized with a violent shivering fit, followed by fever. Three days after this he

sailed from Halifax for Montreal; during the first few days of the voyage he did work, and was consequently exposed much to the weather; from this time he was obliged to keep his berth. On admission he complained principally of great *weakness* and *shortness of breath;* very hot but perspiring skin; quick, sharp pulse; short hurried breathing, the alæ of the nose dilating with each inspiration; scarcely any cough at all, and then no expectoration; constipation, for which he had already taken some doses of medicine; no tenderness in the iliac fossæ, no gurgling, and no spots. A most marked symptom was extreme congestion of a dark livid blue colour, of all the distant parts of the body, especially the ears, cheeks, and nails; percussion showed some limited areas of dulness on the left side, especially in the infra-axillary region, and also slightly behind; in the former spot some rather fine bubbling was to be heard, and in the latter some medium-sized crackling. In front the resonance was tolerably normal throughout, and air was heard entering the lungs freely in every part.

Ordered beef tea, with milk *ad libitum*, and to take the following mixture.

℞ : Potassæ Chloratis ʒ ii.
Acid: Hydrochloric ʒ i.
Infus: Cinchonæ ℥ xii.

Sig. Two tablespoonfuls three times a day.

17th June.—Condition scarcely altered since yesterday; very slight cough with a few adherent sputa without blood. Constipation persists; evidences of congestion even more marked; considerable thirst; tongue slightly coated; bubbling râles as before, and a few are heard in the other lung in front. Pulse 114; temperature 102; respirations 28 per minute.

Ordered to continue beef tea and milk, and give 2 oz. brandy in the day, also sinapisms to the chest, night and morning; omit former mixture, and take

℞ : Ammon Carbon ʒ i.
Extract: Senegæ fluid ʒ vi.
Pulv. Camphoræ ʒ i gr. xii.
Aquæ ℥ vi.

Sig. One tablespoonful every four hours.

18th June. Very weak; some slight bloody viscid expectoration; scarcely any change in the lung sounds; profuse perspiration almost constantly, and considerable thirst; some tendency to irritability of stomach; his only complaint is still *weakness* and *shortness of breath*.

Ordered, in addition to the foregoing, to take ℞ mist: spiritus vini

gallici ℥ viii. in the day, and to have a turpentine and castor oil enema. Also ocasionally some aq: calcis with milk. Pulse 124; temperature 106; respirations 34.

19th June. Still weaker; injection acted freely with relief; an eruption has appeared over the right iliac fossa and lower part of that side; the spots are small, clearly defined and rather dark; about half of them disappear upon pressure, but the remainder are persistent. To-day, in addition to the indistinct small crackling, heard before at different parts of the lungs, there is distinct dulness at the upper part of the right side under the clavicle, and over this region there is well marked pneumonic fine crepitation; the percussion in other parts is less resonant than normal, but nowhere is there decided dulness. Pulse 125; temperature 104; respirations 38.

20th June. Symptoms scarcely altered from yesterday, except that the deep congestion of the ears and nails has become, if possible, more intense, and the expression of the countenance is anxious in the extreme, and the alæ dilate widely with the hurried respiration. His mind remains perfectly clear, and he is inclined even yet to be hopeful. Pulse 130; temperature 103; respirations 56.

Ordered to repeat the injection and continue former treatment, with the addition of champagne to be given freely.

He died on the morning of the 21st June.

*Autopsy.*—Eight hours after death. The rash which appeared on the 19th is still present, showing most of the spots to have been true ecchymoses. *The lungs* enlarged somewhat, and congested; the pleuræ were both studded with numerous small miliary tubercles; on section the lungs were found *filled to repletion* with the same form of tubercle. In a few parts, especially the upper part of the right lung, the adventitious material had broken down and left small vomicæ, none, however, larger than a marrowfat pea; no pneumonic consolidation existed in any part; both lungs floated freely on water. Small crude tubercles also found in the pericardium, the capsule and substance of the liver, in the capsule of the spleen, on the surface of both kidneys and also in their structure. The *brain* was not examined. No disease was found to exist in any part of the intestinal tract.

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## *Four Cases of the Larvæ of an Insect found in the Flesh of Children.*

By Alexander Bethune, M.D., Glanford, Ontario.

Although there are several cases on record of the larvæ of flies being found in the cavities of the human body, yet, I believe, there are very few

where the larvæ of other insects have been found in healthy flesh, without any abrasion of the cuticle.

During the last five years I have seen four such cases, and I thought that a short report of them might be interesting to the readers of your valuable journal, and at the same time some information might be obtained with regard to the frequency and cause of such cases.

*Case* 1. George S——, a fine healthy child, aged nine months, was affected with a swelling in the neck, for which I was requested to see him. I visited him on the 9th of September, 1863, and found him in a very irritable state; the neck was greatly swollen in front and on the right side, and there were four small abscesses which seemed as if they had just burst, but the openings were not large enough to allow the matter to exude freely; the father of the child, called them pipes out of which no matter would run. The little patient seemed to be in great pain, and kept constantly screaming and tearing at his neck with his fingers. As there was a cone which obstructed the opening in the largest abscess, I seized it with a pair of small forceps and extracted it; immediately after doing so, a worm popped its head out of the opening, but withdrew it again at once. A mass of living worms could then be seen quite distinctly, in the cavity of the abscess. I tried to extract some of them with the forceps, but as the opening was too small to allow the instrument to enter, I could not succeed. I then injected a mixture of chloroform and warm water into the cavity, and the worms came popping out, one by one, until the abscess was entirely emptied. There were twelve came out of that one abscess, or cyst—the largest of these measured over three quarters of an inch in length, and the smallest about a quarter of an inch; they were flat and jointed, with black heads, and crawled about over the floor quite fast. On looking into the cavity after it was empty a portion of the sterno cleido mastoid muscle could be distinctly seen, and a piece of its anterior border was eaten away, to the extent of half an inch. The other three abscesses were treated in the same manner as the first one, and out of them there came nine worms, that made twenty-one in all. I tried to preserve some of them, to see what they would turn to, by feeding them with fresh meat, in a box, but they all died in a few days.

On enquiry into the history of this case I learned that the elder children had been in the habit of taking the baby out on the grass, and allowing it to play with them under the trees in the orchard. While playing there about a week before, they were annoyed by several large flies —hornets they called them—which attempted to sting them, and as the child screamed violently several times, they thought he must have been

stung by these insects. On the 5th the first signs of soreness appeared, and the neck soon swelled, the child also seemed very feverish, and the abscess came rapidly to a head and terminated in the manner I have described. There were no bad symptoms followed the extraction of the worms; the swelling soon subsided, and in a few days the child was as well as ever.

*Case* 2. On the 20th of September, 1863, I was called to see Sarah T——, a child aged sixteen months, who was suffering, as her father said, from boils in the feet and legs. On visiting her I found the feet much swollen, and covered with a number of small pimples which seemed to be very painful. I gave her a slight aperient, and ordered poultices of bread and milk to be frequently applied, also to shower the feet well with warm water every time the poultices were changed. Two days after, the child's father came to me in a great hurry, and requested me to visit her again, as there were lots of worms coming out of the sores on the feet. When I arrived the child was sitting with her feet in a pail of warm water, and several small worms were floating on the surface. On taking her feet out of the water a number of them came out of the pimples, and crawled about over her legs and on the floor. They appeared to be much the same as those described in the preceding case, only they were not nearly as large.

On enquiring into the history of the case, I was told that the mother was in the habit of allowing the child to stand by her side, with her bare feet, while she was sewing under the shade of some fruit trees in front of the house, and that she supposed the child's feet had been poisoned by some of the weeds. The little girl soon recovered, without any bad symptoms.

*Case* 3. I had almost forgotten the preceding cases when the next one occurred, and if it had not been for the notes I took at the time, it would now have been almost impossible for me to report them so fully. James S——, a stout healthy child, five months old, broke out over the face and neck, on the 4th July, 1868, with an eruption of small pimples accompanied with a high fever; the eruption made him very irritable, and he kept screaming and scratching most of the time. I saw him on the 7th, and was told that they had applied a large piece of fat fresh pork over the parts, to see if that would not ease the child a little, and that after the application of the pork, a number of small worms were found on the head and shoulders of the child. They had put some of them into a bottle, and kept them until my arrival. When the pork was removed, quite a lot of worms could be seen coming out of the pimples, but I did not observe more than one in each, although some of the empty cysts seemed as if they had contained more. I counted

twenty-three of these worms; they were about half an inch in length, with black heads, and crawled about quite fast for their size. In appearance they resembled those already described, and I have no doubt they were of the same species. A solution of sodæ hyposulphite, ʒ ii to the pint, was frequently applied, and in a few days the child was well. The history of this case was much the same as the first one I have reported: the elder children had taken the little one out under the shade of the trees in the orchard, and had rolled about on the grass a good deal, but they had no idea that any insect had stung him.

*Case* 4. Ellen M——, a child two months old, was attacked with an eruption in her feet, chiefly on the soles, on the 8th of July, 1868, and as I was passing her father's house on the 10th, he called me in to see her. He said that several small worms had been coming out of her flesh, and he was very much alarmed about it. The child's mother said she had found some on her body when she was washing her in the morning, and afterwards she saw some coming out of the pimples in her feet. On examining the feet, several small watery pimples were seen, and on opening them a worm was found in each. I took out several of them, and they appeared to be similar to those I have already described, but they were much smaller, the largest of them would scarcely measure a quarter of an inch, as they did not seem to have arrived at maturity. The mother told me that she had been in the habit of sitting on some boards outside, with the child, but that she had never laid it down or sat on the grass, while she had the child in her lap. I asked her to shew me the boards where she had been sitting, and I found that they were near some fruit trees, and also that there was a good deal of long grass around the boards in which the child's feet must have dangled when she held it on her knee. This child also recovered without any bad symptoms.

What these larvæ were I do not pretend to say; but as they all occurred in young children who had been allowed to come in contact with the grass, under or near fruit trees, and as the worms had all the same appearance, I am inclined to think that these children must have been stung by the same species of insect, and that as these worms were very much like those we find in apples and other fruit, that perhaps they were produced by the same cause. However, I can scarcely think that human flesh would be suitable for the production of the same species of larvæ. In the "Cyclopedia of Practical Medicine" there are several cases reported, where the larvæ of flies were found in the ears, nostrils, &c. "Worms resembling the lumbricus teres, but more of a white colour, have been seen, according to Lister, coming from an abscess in the ankle." M. Bosse, in the thirty-second volume of the "Journal de

Medicine," gives a description of the larvæ of flies found in pustules in the skin of a negress. Such seem also to have been the *eleophagi* of the old writers, or worms found in wounds, and supposed to feed on flesh.

Glanford, Ontario, August 4th, 1868.

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*Case of Depressed Fracture of the Cranium—Recovery.* By John Reddy, M.D., L.R.C.S.I., &c., Attending Physician Montreal General Hospital. Reported by T. G. Roddick, M.D., House Apothecary.

Neil Easton, *æt.* 32, was brought to the Montreal General Hospital on the morning of July 24th, having been found in a state of insensibility on the track of the Grand Trunk Railway near Caughnawaga. He was admitted under care of Dr. Reddy, attending Physician, his condition being as follows :—

A scalp wound extended from an inch above the inner angle of the left orbit obliquely across the forehead and right frontal eminence to the extent of five inches in length. A depressed fracture half an inch in breadth, or in which the little finger could be comfortably laid, was found to traverse about two-thirds of this distance, the depth of the depression being, as nearly as could be estimated, between a quarter and three-eighths of an inch. The edges were nearly perpendicular, and but slightly jagged. In addition, there were two scalp wounds between two and three inches in length, crossing the sagittal suture obliquely in opposite directions. The eyebrows and lids were very much ecchymosed, but otherwise no external injury present. There were signs of cerebral irritation, as indicated by great restlessness and desire to leave his bed. Sensation was acute and motion perfect, showing the absence of paralysis, which might have been looked for in such an injury. The face bore its natural colour, and the body and extremities were of the normal temperature. The pulse was full in volume, normal in rythm, but slow, there being only sixty beats to the minute. The breathing was tranquil ; the pupils of natural size and easily affected with light. When questioned he would answer abruptly, and many of his statements were contradictory. At times he was slightly delirious.

Treatment.—The head was shaved—adhesive plaster used to the smaller wounds and water dressing to the fracture—the whole being covered with an ice bag. The bowels were ordered to be left undisturbed, and perfect rest enjoined. He was put on milk diet and beef tea.

July 25th. The pulse this morning has fallen to forty-eight, and is labouring though full. He appears totally unconscious, and when roused

makes an attempt at articulation, but again lapses into the former insensible condition. The delirium is somewhat worse, and he is very restless. No deviation from the normal size is noticeable in the pupils, and they act well to light. The extremities are cold, but the head and trunk are more than normally warm. Hot applications are ordered to the feet, but otherwise no change made in the treatment.

This evening, the pulse has fallen four degrees, but otherwise no change. Dr. Reddy is of opinion that no operative measures should be at present undertaken, and a consultation bears him out.

26th. To-day the pulse is at forty, and very labouring; breathing slow but tranquil; pupils as before; extremities still very cold; insensibility profound. It is again thought advisable to await further developments. The treatment to remain unaltered.

27th. Pulse thirty-six, still more labouring than yesterday, but the normal rythm remaining; pupils unchanged; very cold extremities; state of respiration not so favourable, being slightly irregular and sighing. A consultation again decided on non-interference for the present.

28th. This morning at seven o'clock, the pulse was found to have risen three beats in the minute, being now thirty-nine. He appears more conscious, but still wandering at times. The pupils continue normal, and contract readily. His condition is altogether better than when noted yesterday, and the same treatment is ordered to be continued. The wounds in the meantime have continued to mend, the larger one at the site of fracture looking healthy and inclined to granulate.

This evening his condition is still more favourable, the pulse having increased four beats since last noted, and not nearly so labouring. He is easily aroused, and when questioned as to his feelings answers rationally, and shows no sign of delirium.

29th. To-day he feels remarkably well, suffers no pain in the head, and converses naturally and with spirit. He is ordered to remain perfectly quiet, and continue cold to the head.

31st. He is improving very rapidly, the pulse to-day being fifty-eight. The smaller wounds are closing fast, while the large one is covered with fine healthy granulations. Having complained of a constipation a dose of castor oil is ordered.

August 1st. At the visit to-day, he is found sitting up and looking exceedingly well and cheerful. He feels no pain in the head, and the wounds are progressing rapidly towards a cure. The pulse is sixty-five.

3rd. The pulse to-day is seventy-four and good. He says he never felt better. The smaller wounds are nearly quite healed, while the other looks very healthy.

7th. Since last noted his condition has continued to improve rapidly. He has a good appetite and converses cheerfully. It is noticed that the right eye-lid droops considerably, no doubt from the division of the fibres of the occipito-frontalis. His pulse has ranged between eighty and eighty-five for the past four days.

12th. Left the hospital this morning with the smaller wounds quite healed, and the large one filled with fine healthy granulations. He is recorded *cured.*

It may be remarked that from the moment he began to mend his recovery was singularly rapid. He could give no definite account of how the accident occurred. Beyond the dose of castor oil on the 29th, no internal treatment was deemed necessary.

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*Method of Treating Fractures of the Olecranon Process, and Head of the Humerus.* By E. A. CLARK, M.D., Resident Physician, St. Louis City Hospital.

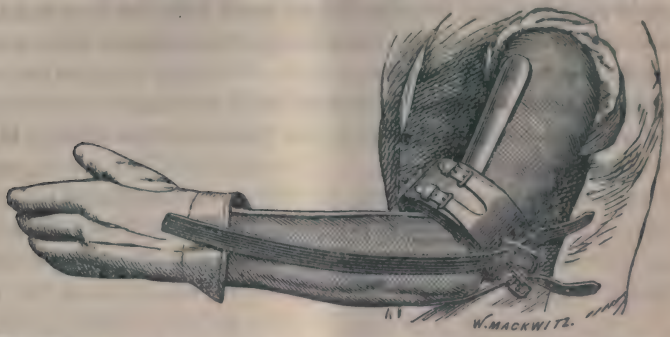
[Through the kindness of Dr. Whitehill, editor of the *Medical Archives*, of St. Louis, we are enabled to submit to our readers the following paper from the pen of Dr. Clark, with the accompanying illustrations. The paper was first published in the *Archives.*—EDS.]

FRACTURES OF THE OLECRANON.

I have found all the ordinary appliances in use for treating fractures of the olecranon so deficient in meeting the indications required, that I have been induced to devise the apparatus represented in the following woodcut, which is sufficiently simple to require but little description.

Fractures of the olecranon, as they usually occur towards the middle or base of the process, are generally attended with such a degree of displacement—especially in muscular subjects—that the ordinary method of applying narrow strips of cotton or cloth around the arm—both above and below the elbow—and approximating them by means of lateral strips, as recommended by Sir Astley Cooper and Amesbury, with the view of drawing down the upper fragment in apposition with the head of the ulna, and thus securing the condition most favourable for bony union, will necessarily require these bands to be so tight around the arms, at both points, as to arrest the circulation. This danger will be the more imminent in cases where there is much contusion and swelling of the soft parts, which, as might be expected, from the very nature of the violence or force required to produce this fracture, is almost always the case. The

method of treatment recommended by these gentlemen is also objectionable, in that they direct that the arm be kept in the straight position.




The apparatus above represented consists of a band of ordinary sole leather about two inches in width, and of sufficient length to surround the arm, lined with cloth or chamois, and well padded with cotton or hair. In order to give the band additional firmness, and also to secure it around the arm, a strip of common harness-leather is stitched upon the outside, to one end of which two small buckles are attached, while the other end, which extends about three inches beyond the band, is split or cut into two straps to correspond with, and fasten into the buckles. The band is fastened around the arm above the fractural process, and may be drawn to any degree of tightness necessary to bring the broken fragment down when traction is made upon it.

The same band may be used on either arm, and may be adapted to an arm of any size. On the outer side of this band, and one inch apart—one on each side of the olecranon—are two buckles or staples, which should be two inches in length, and three-fourths of an inch in width, and clinched on the inside of the leather band, from which they project at a right angle. These buckles or staples also have three bars across them, with two tongues made to turn either way.

In applying this apparatus the arm should be flexed at an angle of 45 degrees, and a common pasteboard splint bent at that angle placed upon its anterior surface. The leather band is then buckled over this splint, just above the fragment of the olecranon, and the entire fore-arm is covered with a bandage to hold the anterior splint firm to the arm, and thus prevent any movement of the elbow-joint, which, if allowed, would be constantly modifying the force exerted upon the fracture. A common buckskin glove is then placed upon the hand, to the anterior and posterior surfaces of which are attached two leather straps, which are to be buckled into staples on the band. By buckling these straps over the bars at a

greater or less distance from the band, and tightening them as required, we obtain the necessary amount of leverage to turn the lower edge of the band in upon the arm, and push the fractured process down before it.

By making traction upon these straps any degree of force may be exerted upon the band, necessary to draw the broken fragment down and hold it in perfect apposition with the head of the ulna.

It may be objected to this method of treatment, that the arm is held in a flexed position, thus increasing the space between the two fragments. But the advantage of this position is apparent for two reasons:

First, by flexing the arm to this extent the point of the olecranon is made more prominent, and, consequently, the band more surely adjusted, so as not to slip over it; while, again, the force exerted upon the band by the straps, directed at an angle of forty-five degrees from the axis of the humerus, renders the pressure still more secure above the point of the olecranon and prevents the possibility of it slipping back beneath the band.

The second reason for fixing the arm in this position is to relax the brachialis anticus muscle, the action of which, in cases where the fracture occurs low down, near the base of the olecranon, and especially in a muscular subject, when the arm is held in a perfectly straight position, evidently draws the head of the ulna forward, so that a portion of its fractured surface is in direct apposition with the articular surface of the lower end of the humerus; while if the detached fragment of the olecranon be forced down to its proper position it would not be in complete apposition with the upper end of the ulna, but would leave a triangular space in the articulation to be filled up by callous, and thus produce more or less complete anchylosis of the joint.

This apparatus when applied as described, is in no way painful to the patient, the band being padded in the inside, and the pressure exerted by it on the anterior surface of the arm bearing upon the pasteboard splint; the only other pressure exercised is directly upon the the olecranon, and that upon such a broad surface that sloughing need not occur in any case.

I have treated but one case with this apparatus, and with the following result:

A labouring man, aged 32 years, was admitted to hospital five days after receiving a fracture of the olecranon near its base. At the time of his admission he had an abscess as large as a hen's egg immediately over the point of the olecranon, resulting from a contusion received when the bone was fractured. The abscess was opened before the dressing was applied, and, notwithstanding all the repssure required, to hold the bones

in apposition, was made upon the point over the abscess, it healed quite readily, and in seven weeks the apparatus was removed, leaving firm, bony union in the fracture, without the least deformity or displacement; and now—three weeks since—the patient has recovered almost perfect use of his arm.

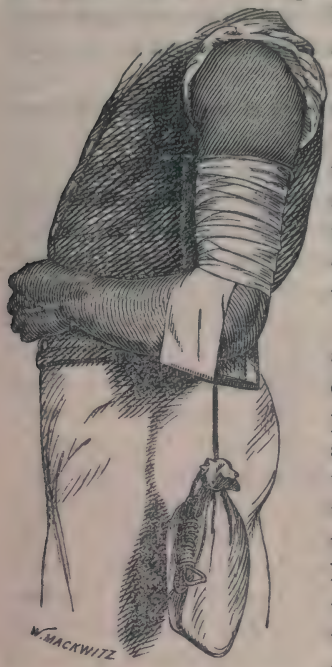
No passive motion of the joint was allowed at any period of the treatment.

### FRACTURES OF THE HEAD OF THE HUMERUS.

Every surgeon who has had much experience in treating fractures about the head of the humerus can testify to the great difficulty of maintaining the fragments in apposition, even with the most ingenious appliances, amongst which those of Desault, Sir A. Cooper, Fergusson, Erichsen, Welch, Richerard and Dupuytren are most generally used. The very fact that the means of treating these fractures have been changed and modified by so many distinguished surgeons, is sufficient evidence of the difficulties to be encountered in adapting any apparatus to correct the deformity most usually found to exist in these injuries.

In speaking of fractures of the head of the humerus, I refer only to that portion of the bone above the attachment of the latissimus dorsi and pectoralis major muscles. This would embrace—external to the capsular ligament—the tubercles and surgical neck, in the latter of which fractures most frequently occur from direct violence; yet fractures not unfrequently occur through the tubercles from the same cause, and in both cases, there is always more or less displacement, where the fracture is complete and not impacted. Fractures of the anatomical neck are not so often attended with displacement, or shortening, but even here it is not uncommon from the great violence required to produce the fracture, to find the capsular ligament ruptured and one or both fragments displaced. In all cases of fracture occurring outside of the capsule, where there is no impaction, there must be more or less displacement of the upper fragment from the contraction of the muscles attached about the tubercles. It is on this account that none of the appliances in ordinary use, such as pads in the axilla, and cap splints over the point of the shoulder, can be made effectual in maintaining the bones in apposition; because it is impossible to place any kind of compress in the axilla, that can be brought to bear upon the upper fragment, without producing an amount of pressure on the axillary vessels intolerable to the patient, while it would be a rare and peculiar fracture that could be kept in apposition, where the upper fragment and muscles attached to it were allowed to go unrestrained, even though the shaft of the humerus might be maintained in its proper axis by the use of a pad in the axilla.

Where there is shortening of the limb, as is almost invariably the case in fractures at the surgical neck, none of these appliances could have the least influence in correcting such deformity, further than that the pressure from the bandages might control the contraction of the muscles.




In fracture of the anatomical neck with laceration of the capsular ligament attended with displacement, the pad in the axilla would be likely to increase the deformity, and it certainly could in no wise correct it.

The accompanying woodcut represents a method I have employed which is not open to the above objections. The appliance consists merely of two strips of adhesive plaster about three inches in width, applied to the internal and external surface of the arm as high as the upper part of the middle third of the humerus. These strips are bound to the arm by a roller bandage, and at their lower end, beneath the point of the elbow, are attached to a cord, to which a sandbag is attached, weighing, ordinarily, from three to four pounds.

This sand bag, as represented in the diagram, is attached close to the point of the elbow when the patient wishes to walk about, by knotting the cord by which it is suspended, and when he lies in bed, the knot in the cord, as seen in the cut, is loosed, and the cord carried beneath the bed clothing over a small pulley placed at the foot of the bed, and in this way an equal extension is constantly kept up, whether the patient be confined to his bed or is able and prefers to walk about.

When using this apparatus for treating these fractures, I apply no other dressing, and entirely ignore the compress in the axilla, as useless if not positively injurious. The constant traction upon the muscles soon exhausts their tonicity, so that they allow the bones to fall into their natural position, while the extension being constantly in the line of the axis of the humerus, it is quite impossible that any displacement should continue, either laterally or of an angular character, or that any shortening should result.

I have, as yet, treated but one case of fracture of the surgical neck of the humerus by this method.

The patient was a stout muscular man, aged 33 years, who had fallen some twelve feet, striking the point of the shoulder upon the ground, causing considerable contusion of the soft parts besides the fracture, which was considerably displaced, by the lower fragment projecting outward; there was also shortening to the extent of three-fourths of an inch. The patient complained of constant and severe pain at the point of fracture until the third day, when the above apparatus was applied, with the effect of relieving the pain almost instantly. At the end of seven weeks the dressing was removed and the union in the fracture found to be firm, without any displacement or shortening, and in ten days after, the patient was discharged from the hospital with perfect use of his arm.

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## REVIEWS AND NOTICES OF BOOKS.

*The Indigestions; or Diseases of the Digestive Organs functionally treated.* By THOMAS KING CHAMBERS, Honorary Physician to H. R. H. the Prince of Wales, Consulting Physician and Lecturer on the Practice of Medicine at St. Mary's Hospital, &c., &c. Second American, from the Second and Revised London Edition. 8vo., pp. 319. Philadelphia: Henry C. Lea, 1868. Montreal: Dawson Bros.

In the year 1856 Dr. Chambers published a volume on the subject of dyspepsia, which was, at the time, well received. It has been long out of print, as no second edition appeared. The present volume is not a reproduction with a new face, but it in verity a new work. This, the second edition, comes to us considerably enlarged from that which appeared two years since, the author has added much material, chiefly in the form of cases, taken from his note-book or from the records of St. Mary's Hospital. These cases and the accompanying observations are linked together, so that the reader becomes deeply interested as he goes on. They are given much after the fashion of familiar clinical observations, and are highly practical in their bearing. There is an absence of unfathomable theory, which is occasionally so oppressive to the reader. The author describes the method he adopted in heaping up his store of information.

"So pleasant has been the holiday task thus

'.....to the sessions of sweet silent thought
To summon up remembrance of things past.'

that I am fain to dwell upon it, and to try to lead others towards the same source of enjoyment by describing the way in which my store has been heaped up. For it is needless to say I did not lean on my memory alone, or the number of trustworthy histories would have been few indeed.

"The cases of those who are named as inmates of St. Mary's Hospital in the following pages are copied mainly from the diary kept by the clinical clerks. I have been always used to make this a chief source of teaching. The clerk was instructed to take notes with the sick person before him, and in his own words; and when he read them out at my visit, I added my observations, sometimes in the hospital case books, sometimes in my own. These formed the groundwork on which to build my clinical lectures for the current week. They are irregular in wording, but preserve a fair record of the disease.

"The details of private practice have been kept in a shorter and more mechanical way. I make it a rule, to which exceptions need be very few, to write all prescriptions and papers of advice in a copying-book, which makes a duplicate of them by means of transfer paper; and at the back of this transcript I write, usually with the patient before me, his history, at least so far as to explain my reasons for the advice, before I go on to the next page. The periodical indexing of these sheets is an easy job for an hour of weariness; and the whole time consumed is so crumbled up that it is never missed, and neither business nor amusement feels itself robbed.

"Some people tell me they can make their notes of the day's work more fully and scientifically when it is over, and they are quiet in their study. I do not like the plan so well. For one thing it interferes with the relaxation needed to keep the mind healthy and broad. That time belongs to rest—*datur hora quieti*—and should not be wasted on labour. An instinctive feeling of the truth of this causes a duty which is put off to such an opportunity to be put off often still further, often altogether. Again, unless an immediate note be made, the new and the strange in the day's experience are stamped in the mind deeper than the commonplace, and so they are apt to take up more than their fair share of room in the diary; while personal friendships, the social standing of the patient, and other considerations will sometimes blot out, sometimes unduly brighten our recollections of the case."

The work consists of nine chapters. The first is devoted to a general introduction in which the author's chief object has been to shew the importance of a skilful management of the digestive organs in disease;

not alone in disease affecting the digestive apparatus, but in all attacks of departure from health.

"Let us not be deceived by the expression 'merely symptomatic' sometimes applied to the derangements of digestion where organic changes exist. All parts and functions of the body are so knit together in one to form the great circle of life, that their comparative value to individual existence is more a question of time than of power. The failure of any one shortens the days more or less, and the immediate cause of death is as often a mere symptom as an organic change. It is also a serious consideration that in respect of the patient in chronic pathological states this is in reality often the whole duty of the medical adviser. Often, on stating in consultation an opinion that some viscus is chronically degenerated, one is met by the remark, 'Well, what is to be done?—we cannot cure that.' Very likely not; then let us try and find something else which we can cure. In the great majority of patients this curable something may be found in functional impediments to the entrance of nutriment into the medium of assimilation; and when once nutriment can be got in, a cure is begun. Do not, therefore, let us indulge despair even after it has become certain that the principal viscus which gives a name to the disease is past remedies, and though little can be prescribed for the part mainly affected. It is seldom too late to try and administer to the failing organ the most potent of all remedies, the human blood of the patient himself, made healthy by the means adopted, and flowing in continuously by its natural channels."

This is practically a great truth, and it will be found that there are few diseases which will resist the supply of good healthy blood; at any rate we place our patient in the best possible condition for throwing off disease, and the power of nature will be found of greater and more lasting benefit than that of drugs.

The second chapter is on "Indigestion" of various foods.

The third chapter contains a description of the habits of social life, leading to indigestion, such as eating too little or too much, sedentary habits, tight-lacing, compression of the epigastrium by shoemakers and other craftsmen, sexual excesses, solitude, abuse of purgatives, abuse of alcohol, tobacco, tea, and opium. These are severally considered under separate sections, and each illustrated by appropriate cases.

Chapter iv. is on abdominal pains. In this are considered, heartburn, waterbrash, spasms, gripes, a sense of weight, soreness on pressure, and anomalous pains. Chapter v. is on vomiting. The author commences this chapter with a few introductory remarks on the physiology of the process, after which he proceeds to discuss the various substances

vomited, and the indications in each case. The concluding chapters are on flatulence, diarrhœa, constipation and costiveness, and also the nerve disorders connected with indigestion, these latter consist of headache and hemicrania, vertigo, loss of the control over the thoughts, epilepsy, chorea, cough, anæsthesia and paralysis, atrophy of the muscles, flushing of the face, and nettle rash.

The author has also prepared an analysis of the cases (some two hundred and sixty in number) which are embodied in work, which will be found very useful for ready reference. It is a work which we can heartily recommend to our readers. The type is clear and paper good; in fact it is most creditably got up by the publisher, Henry C. Lea. To be had of Dawson Bros., Great St. James Street.

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*On Diseases of the Skin: a system of Cutaneous Medicine.* By ERASMUS WILSON, F.R.S. Seventh American, from the Sixth and Revised English Edition, with twenty plates and illustrations on wood. Royal 8vo. pp. 808. Philadelphia: Henry C. Lea. Montreal: Dawson Bros.

We have received a copy of this work from the publisher; in acknowledging it we must say that he has given to the American medical world a reprint in everyway worthy of a first class publishing house.

We notice that the plates prepared by Mr. Wilson in illustration of the subject of syphilis and syphilitic eruptions have been embodied in this edition; of these latter we can only speak in terms of high commendation. They are lithographs done by T. Sinclair, of Philadelphia, in the highest style of that art. With regard to the writings of Mr. Erasmus Wilson, they are too well known to the profession to call for commendation from us. The skin, as an organ of the body, must be regarded as possessing an influence second to none in the whole economy. When we consider its extent of surface, and the important function it performs as a blood depurator, it necessarily follows that any departure from a healthy standard, either in part or in whole, of this important organ must be attended by the most serious consequences. This, then, is one great argument in favour of the careful study of dermatology. We can heartily recommend this edition to our readers, as the plates that have been added increase the value of the work. It is to be had of Dawson Brothers.

# PERISCOPIC DEPARTMENT.

## Medicine.

### CARBOLIC ACID AS A REMEDIAL AGENT.

By W. Kempster, M.D., Utica, N. Y.

It is not my intention, however, to speak particularly of it as a disinfectant, but rather to offer a few suggestions concerning its use as a therapeutic agent.

Pure carbolic acid is a white crystalline substance, the particles adhering with considerable tenacity, and after standing for some time, especially if the bottle be frequently opened, becomes slightly deliquescent and more tightly packed together. The two varieties of crystallized acid more generally found in the American market are prepared by Merck, of Darmstadt, and Calvert, of Manchester, England. Merck's preparation has a slight reddish tinge. Calvert's is quite white, having the appearance of snow which has been soaked in water. Merck's contains about 98 per cent. of pure acid, and is slightly more deliquescent than Calvert's, which is pure. Merck's, however, is sufficiently pure for all practical purposes, and is furnished at a lower price.

The first application of this agent, under my own observation, occurred in a case of catarrh, where the discharge was profuse, offensive, and consequently very annoying to the patient. Various remedies had been previously tried, without success. Hoping to derive advantage from its properties as a disinfectant, it was administered to the patient by inhalation, using one grain to an ounce of water, and conveying the liquid to the affected parts by means of a steam spray-producer. The effect surpassed my most sanguine expectation. It not only relieved the fetor, but in the course of two or three inhalations changed the character of the discharge, and the patient recovered rapidly.

This induced a trial in a second case, not so serious as the first, but still severe, and the result was equally satisfactory, the symptoms all disappearing in the course of four weeks. After the first few inhalations, the patients were instructed in the use of the spray-producing apparatus, furnished with a bottle of the solution (one grain to the ounce), and directed to inhale the vapour for ten minutes at a time, both morning and evening, enjoining upon them not to leave a warm atmosphere for half an hour after each inhalation.

It is used at the present time in the treatment of ozæna, nasal polypi, and diseases of the nasal passages in which there is an offensive discharge.

Even if it exerted no curative action, its power to correct fetor would be a great recommendation; but this is not all, it stimulates the ulcerated surface to a healthy action, promotes normal granulation and thus assists in the curative process. This remedy is also employed by some of the physicians who are engaged in the special treatment of throat and lung diseases, particularly French practitioners, who direct that it should be inhaled in combination with other appropriate remedies. They speak highly of its efficacy in case of ulcerated sore throat, chronic bronchitis, and that morbid condition of the mucous surfaces of the air pas-ages which gives rise to a constant expectoration of a muco-purulent material. If a solution of one grain of the acid to an ounce of water does not seem to meet the indication, the quantity may be increased to five grains, or even more, but it is better to begin with a mild solution, gradually increasing the strength until the desired effect is obtained.

My next use of the acid was in a case of scarlatina, where the breath was particularly obnoxious, owing to an ulcerated condition of the throat. A gargle of two grains of the acid to an ounce of water relieved the fetor at once, and apparently proved beneficial. No other gargle or application to the throat was used.

It would seem to be appropriate in cases of diphtheria, a strong solution of the acid being used for a local medicament; its power to correct the foul breath would be an indication for its use, and its stringent and stimulating properties might prove beneficial. In cases of common sore throat (simple tonsillitis) it is found to answer admirably, with the advantage over the ordinary potassa gargles of relieving the "bad taste" and foul breath.

In the State Lunatic Asylum at Utica, it is successfully used to relieve cases of sluggishness of the bowels, accompanied by offensive breath. The dose is a drachm of a solution of one grain to the ounce (which is the house standard). A striking exemplification of the efficacy of this remedy occurred in the case of a melancholic patient admitted to this asylum. He had for a number of years suffered from attacks of dyspepsia, accompanied with acid eructations and the formation of gas. Lat. terly these symptoms became continuous. He complained of intense heat, and pain in the stomach; stated that the eructation of fetid gas had become unbearable; and the same smell emanated from the cutaneous surface, so that it was offensive to every one in the room. He was at once put into a warm bath, then thoroughly washed with a solution of the acid (gr. v to the ounce). Internally two drachms of the standard solution were given three times daily for two days. At the end of this time the breath was sweet, and no unpleasant exhalation from the skin

was perceptible. He was also relieved from the painful distention produced by the formation of gas in the stomach and bowels. Whenever he feels the approach of this difficulty, two or three doses of the house preparation relieve him at once from this unpleasant and painful complication.

Yeasty stomach, sometimes consequent upon a meal of rich food, which produces flatulence and expulsion of gas, with a tendency to regurgitation, is usually relieved by a drachm or two of the solution above mentioned; this checks the fermentative process. The power it possesses to arrest fermentation would be an indication for its employment in sarcina, but the opportunity has not offered for me to test this. Diarrhœa produced by eating unripe fruit or other articles which promote fermentation is speedily relieved by combining a drachm or two of the solution with the usual remedies. As a dentifrice, commingled with myrrh or some aromatic, it removes the odour arising from carious teeth.

As a remedial agent in certain forms of skin disease it seems to possess decided advantages. A patient applied for something to relieve a disordered condition of the scalp, which had existed for some time. It proved to be a well-marked case of Tinea capitis in an advanced stage. The crusts had cracked open, with a straight smooth fracture, presenting a shining floor, looking as though the scalp had opened and exposed the cranial bones. There were several of these cracks, measuring from a half inch to two inches in length, the principal ones occupying a position over the region of the anterior fontanelle, and extending several inches in each direction. Other crusts had formed over the temporal and occipital regions. In order that the acid might be effectually tried, the hair was cut short, and the entire scalp washed with a solution of the acid (two grains to the ounce) four times daily. The subsidence of the disease was marked; those crusts in process of formation were checked, and the dry grayish crusts already formed, with those cracked open, were speedily removed. After the wash had been continued for one week, a glycerolate of carbolic acid (strength five grains to the ounce) was applied, which possesses the advantage of being a more permanent preparation. The treatment was commenced January 7th, and at the date of writing (January 28th) the disease has disappeared. No other treatment, either internal or local, was employed. One other case has been mentioned to me, which was even more severe than this, and in which various modes of treatment had been employed without arresting its progress. The treatment mentioned above was resorted to, with an immediate abatement of symptoms and rapid recovery. We have used the glycerolate mentioned in cases of Herpes circinatus, with entire satisfaction.

During the month of December, 1867, I was called to see a girl aged four years, who had been taken suddenly ill. The symptoms indicated scarlatina, and, as there were a number of cases in the neighbourhood, that diagnoiss was made. She was immediately put upon milk-punch and carbolic acid solution, the one-sixteenth of a grain three times daily. I also directed that her face should be washed in water containing a spoonful of the solution (one grain to the ounce) and that the mouth should be sponged out with the same—directing also the use of the commercial acid solution about the house as a disinfectant. At the end of four days the internal administration was discontinued; not because of any unpleasant symptoms, but its continuance did not appear necessary. The mouth-wash, of which the child swallowed a few drops, and all the other applications, were continued; the body being anointed with olive oil, tinctured with carbolic acid. From first to last no untoward symptom appeared; the fever subsided on the fifth day. The throat was not very sore; the tongue was relieved of the creamy coat after the third day; there was no offensive breath, and the child made a complete recovery. No other treatment was employed. A brother of this child, two years older, who had never contracted the disease, and who was with her constantly, had no symptoms of the disorder. His face was washed twice daily in the solution above mentioned.

The medical superintendent of this asylum, Dr. John P. Gray, informs me that in a family of six children, three were simultaneously attacked with scarlatina anginosa. They were put upon a course of treatment similar to the above, the house being thoroughly disinfected. They made a good recovery.

Dr. Gray has spoken to me of a case (sequel of scarlatina anginosa) in which there occurred a very fetid discharge of ichorous pus from the ears and nostrils of the patient. A mild solution of the acid (two grains to the ounce of water) was thrown into the nares and auditorius externus, with the effect of arresting the sanious discharge, and causing its disappearance.

Dr. Bissell states that he has used a solution of carbolic acid—strength two grains to the ounce, the dose being one drachm—as a vermifuge, and has not been disappointed with the remedy. The *oxyuris vermicularis* (pin worm) may be at once destroyed by using as an injection a drachm of the solution to four ounces of water.

Though it was not my intention to speak of this agent as a disinfectant, as it concerns the sick-room directly, yet some remarks may not be inappropriate. Nearly every practitioner has experienced the unpleasant odour emanating from the lying-in room. This may be entirely overcome

by the proper use of the solution of commercial acid—a half ounce of which put into a gallon of boiling water, makes a strong solution—all, indeed, that the water will take up—which if filtered to remove oily matters, may be thrown about the floor with impunity. Two table-spoonfuls at a time are sufficient to disinfect and deodorize a large room, and one half the quantity is generally sufficient. A few drops sprinkled upon the napkins, and applied to the genitalia externa, will remove the unpleasant, pungent odour which accompanies the lochial discharge, thus exempting the patient from a great source of discomfort. A small quantity of the solution put into the close stool before use, destroys the odour which would otherwise occur. Whenever it has been introduced with these objects in view, it has received the unqualified approval of those most interested.

Carbolic acid at once arrests the development of the lower forms of organic life. It stops the fermentation of yeast, kills microscopic infusoria and cheese mites. Nor does its influence end here. In order to test its destructive power over insect and animal life, I procured a cricket, smeared the inside of a wine-glass with the commercial carbolic acid, and inverted it over the cricket, leaving sufficient space at the bottom to allow a supply of air. Immediately after the glass was inverted, the cricket made violent attempts to escape, lasting two or three minutes. It then staggered about and fell over, had a few severe convulsions, and died. A cockroach was next tried, with the same result; it was from ten to fifteen minutes in the vapour.

A mouse was procured, and put into a wide-mouthed, four-quart bottle. A piece of sponge saturated with two drachms of commercial acid was lowered into the bottle and suspended about two inches from the bottom. Five minutes after the introduction of the sponge the mouse staggered as if intoxicated, the movements continuing for fifteen minutes, when a short respite occurred. These paroxysms were repeated several times during one hour and a half, then the animal became violently convulsed, the spasmodic action lasting thirty minutes, when it died. Upon examination it was found that the membranes covering the brain and spinal cord were injected, some of the vessels being very large. The lungs were of a light pink colour, many shades above that observed in the normal human lung: they were collapsed. The heart appeared large, and felt hard: upon opening the organ it was found distended with very dark clots, which bulged out as the incision was made.

A full-grown rat was next subjected to the vapour of carbolic acid; and its manifestations were more strongly marked in this than in the former experiments. The animal was a vicious one, exhibiting great

ferocity; but in less than one minute after the sponge containing the acid had been introduced, the animal appeared sleepy, and as if intoxicated. Twice the animal reared upon its haunches, as if it desired to climb, but had not the strength to do so; and after each attempt, it fell over upon its right side. At the end of forty-five minutes a tremor was observable over the entire body, and it ceased to notice sudden sounds; shortly after this it failed to perceive that it was being handled, and presented all the phenomena of profound anæsthesia. Convulsions followed the tremulousness, which continued to increase in violence until the animal's death, which occurred in one hour and forty-five minutes after the introduction of the sponge. The vessels in the pia mater were found congested, some of them being very much distended. The larger lobes of the brain (cerebrum) presented a greater number of bleeding points than is usually found; the smaller lobes (cerebellum) were highly congested—the vessels being considerably increased in size. The spinal cord appeared exsanguinated in all but the cervical region, which presented a uniform pink blush. The lungs were collapsed and several shades lighter in colour than usual. The heart was tense; and, on being opened, a clot bulged out which filled both left auricle and ventricle.

The same experiment has been performed twice since, the result being alike in each case: in the last instance the convulsions occurred at the end of eighteen minutes; they were more violent in character, and death occurred sooner (fifty minutes).

A peculiarity was noticed in connection with the convulsive movements of both insects and animals—which was, that the forward legs were first convulsed, the spasm ceasing to a great extent in them, as the posterior members became affected; and also that, as the spasm commenced, the animal fell over upon the right side.

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## GRESHAM LECTURE

Delivered by R. Symes Thomson, M. D., etc., in Easter Term.

### On Sleep, etc.

A third part of our lives we spend in sleep, and are thus naturally too familiar with its phenomena to be surprised at its mysterious nature. During sleep the brain is almost bloodless; a gush of blood heralds the return of reason, while in dreaming a pink suffusion intermediate between the circulation of waking and sleeping is observed (Durham). This seems to indicate incidentally that true sleep is dreamless. Every idea which floats through the mind, every emotion, every exercise of reason or volition, is accompanied by definite nerve currents, or, in other words, by a

definite exertion of physical force. There is no reason to doubt, but every reason to believe, that this force is a correlative of the universal cosmical force. It is indeed probable that it is a vibratory or molecular force, similar in character to heat and electricity. It is possible that although the higher or spiritual element in our consciousness may remain as intangible and unknowable as it now appears, we may yet learn to trace its operations, to some extent at least, by studying the physical phenomena with which, in our present state of being, it is associated.

Mind is even more closely associated with force than it is with matter, and it is to the study of force that we should look for a measure of its workings. The whole available force in the body is undoubtedly derived from oxidation. This oxidation is mainly, if not entirely, effected in the blood, and it is therefore evident that a continuous flow of blood to the nerve centres is necessary as a source of power as well as for regeneration of the nerve tissues. The sympathetic nerve centres are supplied continuously with blood, and the force generated by these centres is, like the blood supply, continuous, so the operations they govern, whether of secretion or involuntary muscular action, go on without intermission, or rather without long periods of rest; for it must be borne in mind that the heart rests between each pulsation at least a quarter of the time. The respiratory muscles rest one-third of their time. In walking some muscles rest while others are in action. But there is no rest for the brain except in sleep. The cerebrum, if not the whole of the cephalic ganglia, receives a full supply of blood only during waking hours, and is therefore subject to frequent intermissions in the discharge of its functions.

It has been shown (Ranké) that the feeling of fatigue in voluntary muscles is due partly to the sensation of impotence, the store of force being exhausted; but chiefly to the accumulation of the products of disintegration in the tissues. It has been shown, too (Claude Bernard), that the direction and intensity of the flow of blood are greatly under nervous control, and it is probable that the condition we call sleep is induced by the operation of the nerves whose special business it is to control the flow of blood to the brain. The blood ceasing to flow freely to the brain, there is no store of force to draw upon; nerve currents can no longer be produced. If during this state a ray of light fall on the retina, no perception follows, for though it may produce an afferent current in the optic nerve, this current will not have sufficient intensity to stimulate into action the feeble force remaining in the sensorium; so it dies away without stimulating new nerve currents. The profoundness of sleep is probably proportionate to the amount of blood circulating in the brain, and it is probable the brain is never absolutely destitute of blood.

Hence, a powerful stimulus, as a loud sound or bright light, may nearly always stimulate into activity sufficient force to awaken reflex current, which shall draw more blood to the brain, and so produce the waking state.

Anæsthetics not only act upon and check oxidation in the blood, but arrest the blood supply to the brain by their action on the nerves which regulate it.

The enormous physical effects which may follow a very slight physical stimulus prove that the stimulus does not supply the force, but simply acts as a stimulus, like a spark on gunpowder.

It must not be thought, however, that there is no blood in the brain during sleep, for the vital fluid is just as essential for the nutritive work which is so actively done then as it is for the functional work of waking hours. When the circulation is "slowed" exosmosis, with nutrition of tissue, goes on most rapidly, while activity of circulation favours endosmosis of those products of oxidation which, if retained, would check further action.

We do not know the precise nature of the waste product produced by brain action (it is probably allied to the lactic acid developed by muscular work) but, as with muscles, burning tapers, and generators of electricity, unremoved products, interfere with further action. These products are formed in close brain work more rapidly than they can be removed; they check oxidation and functional activity, and thus tend, by calling for repose, to prevent exhaustion. The feeling of lassitude and drowsiness attendant on this state continues till the waste products are got rid of. To this end, healthy action of all the excreting organs is essential to clear intellect and happy activity of mind.

The lecturer having placed the foregoing physiological data before his audience in the simplest language, freed from all technicality and forensic verbage, showed that regular uninterrupted repose was essential to mental and physical heath; that the blood, whence all nerve force, as well as muscular force, is derived, must be suitably fed, and the excreting organs kept in good working order.

While it is true that the more active the mind, the greater the need of sleep, yet the sanguine and energetic in whom "the lamp of life burns strong and bright," whose nutritive processes are rapid and efficient, sleep deeply and quickly, gaining in four or five hours as much rest and recreation as the plethoric and phlegmatic, in whom "the light of intellect is dim," secure in nine or ten hours of disturbed slumber. If much work is to be done, the former state is to be aimed at; if "time to be killed," the latter.

Although habitual impressions, as the "morning gun" on shipboar do not rouse the sleeper, the cessation of habitual impressions rouses at once, as at the end of a sermon. The instance often recorded of the signal lieutenant who could not be awoke by the loudest noise or most violent shaking, but started at once into wakeful attention when the word "signal" was whispered near him, illustrates the fact that receptivity as the sensorium is needed before a stimulus conveyed by the senses can rouse dormant consciousness.

Sleeplessness after prolonged study, due to passive dilatation or deficient tone in the cerebral vessels, is to be treated by those means that withdraw blood from the head—*e.g.*, warm water to the feet, cold splash of face, shoulders, etc., and vigorous friction, so as to draw blood to the rubbed skin and rubbing muscles. Prolonged wakefulness was shown to be a cause of deficient mental power, insanity, etc.

The lecture, which was profusely illustrated throughout, contained a description of some of the physiological and psychological phenomena of dreams, and concluded with a vigorous appeal to the audience to avoid the evil of the day, which is not so much overwork as undersleep.—*Medical Times and Gazette.*

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## TREATMENT OF HÆMOPTYSIS BY ERGOT OF RYE.

By Horace Dobell, M.D., Senior Physician to the Royal Hospital for Diseases of the Chest, etc.

Following the lead of Dr. Symonds and Dr. Kennion; I venture to give the following memorandum. In common with other physicians who, like myself, are connected with hospitals for diseases of the chest, I see every year a large number of cases of severe pulmonary hæmorrhage resulting from a variety of causes.

There is scarcely any complaint that gives such serious alarm to the friends of a patient as profuse hæmoptysis; and there are few occasions on which a consultation is so urgently requested, and so readily granted by the family doctor, as when a patient appears to be "bleeding to death." But every medical man of experience considers himself perfectly qualified to treat hæmoptysis; and it is almost the rule, therefore, that, when called to these cases in consultation, one of the first remarks of the doctor in attendance is, that "everything possible has been done, and every remedy tried, but in vain." It is assumed, in fact, that the only object of the consultation is to sanction the inevitable death of the patient. Yet, according to my experience, it is exceedingly rare for a patient to die of

hæmoptysis. In these remarks, I confine myself to cases of pulmonary hæmorrhage due to tuberculous disease of the lungs, which make up the large majority of all cases of severe hæmoptysis.

I attribute the success of my practice in this respect mainly to the use of ergot of rye; because it is quite true, as already suggested, that, in nearly every consultation-case of appalling hæmoptysis that I have seen, "everything has been done, and every remedy tried," with the one exception of ergot of rye; and the use of this remedy has generally turned the fate of the patient. It has always struck me as a singular fact, that general practitioners, who are so well acquainted with the effects of ergot in uterine hæmorrhage—who use it more frequently than any other class of practitioners—with whom, in fact, it is almost a "pocket-companion"—never seem to think of using it in pulmonary hæmorrhage. I find, from frequent enquiry of my medical friends, that this is explained by the prevalence of the idea that ergot only acts by inducing contractions of the muscular tissue of the uterus; its remarkable power of inducing contraction of the blood-vessels being lost sight of. This is so generally the case, that I never met with but one general practitioner in the London district (in the country, it seems to be better known) who was at all aware of the power of ergot to control hæmoptysis. This exception was Dr. Betts, formerly of Highgate, now of Ventnor, who has as much confidence in the remedy as I have myself, and dates his confidence from the occurrence that, when a student at Guy's Hospital many years ago, suffering from profuse and intractable pulmonary hæmorrhage, under the care of the late Dr. Addison, his case was on the point of being given up as hopeless, when the bleeding was suddenly brought to a standstill by a large dose of ergot, administered at his own request; the idea having occurred to him, that, as it so often arrested uterine hæmorrhage, it might also answer in hæmoptysis.

But I have said that, in the appalling cases to which I have referred, "everything else had been done, and every remedy tried," before I ordered the ergot; and I desire to attach the greatest importance to this fact. Ergot is only competent to do one of the many things necessary to stop a severe pulmonary hæmorrhage; viz., to contract the vessels. It is necessary to do much more than this.

1. The vital power must be supported by brandy, iced milk, and beef-tea, if indicated by the general symptoms.

2. The heart must be kept steady by digitalis.

3. Congestion must be relieved by saline purging.

4. Clotting of the blood must be promoted by styptics, and by the free admission of cold air.

5. The bleeding part must be kept at rest by position, by enforced silence, and by soothing the cough.

In spite, therefore, of the fashionable outcry against complicated prescriptions, I venture to give the following as the most efficacious, and, as it seems to me, the most rational, combination of remedies for a case of profuse tubercular pulmonary hæmorrhage. It has served me many a good turn, and I hope it may do the same for my professional brethren.

℞ Ebt. ergotæ liq. ʒ ij (to contract the vessels); tincturæ digitalis ʒ ij (to steady the heart); acidi gallici ʒ j (to clot the blood); magn. sulphatis ʒ vj (to relieve congestion); acidi sulphurici diluti ʒ j (to assist the rest); infusi rosæ acidi ad ℥ viij (to make a mixture). A sixth part every three hours till hæmorrhage is arrested.

In any given case, either of the ingredients may be omitted, if the symptoms indicate that it is not required, or that it has already done its duty.—*British Medical Journal.*

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## Midwifery and Diseases of Women and Children.

### ACCOUNT OF THE FOUR-LEGGED CHILD.

NASHVILLE, TENN., JUNE 16, 1868.

The undersigned, in reponse to the request of a number of physicians and of the relatives and friends of the unfortunate subject of this investigation, give the following testimony: The infant, J. Myrtle Corban, *has four legs and two distinct female organs of generation, with two external openings of the urethra and two external openings of the double rectum.* The external genito-urinary organs are as distinct as if they belonged to two separate living beings. The fæces and urine are passed (most generally simultaneously, particularly the urine), from both external urinary and internal openings, situated respectively between the left and right pairs of legs.

The head and trunk are those of a living, well-developed, healthy, active infant of about five weeks, whilst the *lower portion of the body is divided into the members of two distinct individuals, near the junction of the spinal column with the os sacrum.* As far as our examination could be prosecuted in the living child, we are led to the belief that the lower portion of the spinal column is divided or cleft, and that there are *two pelvic arches supporting the four limbs*, which are situated upon the same plane.

Photographs of this infant have been made by the advice and under the supervision of one of our number.

The reality in this case surpasses expectation, and we are of the opinion that this most interesting *living monstrosity* exceeds in its curious manifestation of the powers of nature in abnormal productions, the celebrated "Siamese Twins."

JOSEPH JONES, M. D.,
Prof. of Phys. and Path., University of Nashville.
PAUL F. EVE, M. D.,
Prof. of Surgery, University of Nashville.

*Further remarks by Professors* JONES *and* EVES, *for this Journal.*

Josephine Myrtle is the third offspring of W. H. and Nancy Corban, aged twenty-five and thirty-four, the wife being the senior by nine years. They are so much alike in appearance, having red hair, blue eyes, and very fair complexion, as to produce the impression of their being blood kin, which, however, is not the case. Mrs. Corban is from North Alabama, had borne one child to a former husband, the child having dark colouring, and resembling mostly the father, who had black hair and eyes. Her three children are all girls; the one already alluded to, now six years old, another three, and this *infant monstrosity*, now to be more minutely described, born the 12th of May, 1868, in Lincoln county, Tennessee, five weeks ago.

Mr. Corban is a Georgian, served in the Confederate army through the war, and was severely wounded in the right arm and left hand. The parents are in fair health, though the mother is anæmic. She recollects no fright or disturbance during her last pregnancy. The presentation was fortunately the head, which accounts for the preservation of the life of the child. It would be curious to speculate on the trouble which might have been produced had the feet or breech presented, while the result, in all probability, would have proved fatal to the infant, and possibly to the mother. Mrs. Corban says that there was nothing peculiar in the labour or delivery. When three weeks old the child weighed ten pounds. It now nurses healthily, is thriving well and we saw it urinate simultaneously, between the *two pairs of labia of the two vaginæ*, situated about six inches apart. From the crown of the head to the umbilicus the child measures twelve inches, and from this point to the toes of the right and left external feet, eleven inches. From the umbilicus up, all is natural and well formed; all below this extraordinary and unnatural. An inch below the navel is a mark of an apparent failure for a second one. *There are four distint, pretty well developed, lower extremities.* They exist in pairs on both sides of the

median line, which resembles the cleft of an ordinary pair of legs; but here there are no marks whatever of arms or genital organs, and upon pressure we discover no os coccygis or sacrum. The outer legs of both sides are the most natural of the four, (though the foot of the right one is clubbed,) but are widely separated by the two supernumary ones, which are less developed, except at their junction with the body, from which they taper to the feet and toes more diminutive and which are turned inwards. One toe is bifid on the left extra inward extremity. At birth these extra legs were folded flat upon the abdomen. We are led to believe that there are *two uteri as well as two recti;* in fact, that the pelvic organs are double. Of course a minute dissection would alone expose the true condition of these parts.

Should this infant reach maturity and the internal generative organs be double, there is nothing to prevent conception on both sides. The first difficulty will, however, be in her walking. The outer, or external legs, may be used for progression; the inner or inturned ones, probably never. These might be successfully amputated at the knees, or higher up.

One of us recollects being in London, in January, 1830, at an exhibition of the Siamese Twins, when Sir Astley Cooper gave an opinion adverse to an operation with a view to separate them, but which has always appeared to us as feasible and without much risk of peritonitis; an operation too, which should undoubtedly be performed in case of the death of one of them, for no medical man believes in the vulgar impression that they must die simultaneously. In the present case all surgical interference is, of course, out of the question, except that alluded to—removal of the extra legs.

Cases somewhat similar to the above have occurred and been described. Rokitansky refers to two completely distinct bodies conjoined at their ossa sacra or coccyges, as in the well-known Hungarian sisters, Helena and Judith, born in 1801, who survived their twenty-second year.

Geoffrey St. Hilaire alludes to cases of a trunk with two heads, some even Janus-like, having four upper and four lower extremities.

The case, however, recalled most vividly by Josephine Myrtle, is that of Rita Christina, well known in Europe, and accurately described in this country years ago by Prof. Meigs. In this wonderful instance, there were *two heads, two necks, four arms*, but only two legs; and was thus the reverse of our case. In fact, the *two* children would, if properly organized, have made *two girls.*

From the umbilicus down, there was one well-formed child, but above this all the organs were double; in reality, there existed two beings.

The rectum and bladder were common to both, but all else in the trunk was double and distinct. One would sleep while the other played, etc., for they had *two spinal marrows, two brains, two hearts*, but which occupied a common pericardium. Unfortunately, after surviving a little over a year, one sickened and died, when the other, then in health, instantly expired.

Rita and Christina were born in Sardina, 1829, and described by Dr. De Michaelis, Prof. of Surgery in the Royal University of Sassari, and lived eighteen months.

The late Prof. J. C. Warren of Coston, first described the Siamese twin brothers, when purchased of their mother by Capt. Coffin and Mr. Hunter (joint owners) and brought to that city, in 1829.—*Richmond and Louisville Medical Journal.*

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## THE MORNING SICKNESS OF PREGNANCY.

The *Lancet* of February 22, gives a brief summary of the treatment adopted in several of the London hospitals for the relief of morning sickness in pregnancy.

The plan of treatment which Dr. Greenhalgh of St. Bartholomew's has found most successful consists of rest in the semi-recumbent position especially after meals, which should consist of bland, nutritious, and unstimulating food, frequently administered, and in small quantities. The patient should take a little coffee about a quarter of an hour before rising, and should guard against long fasts. Great attention must be paid to the bowels. In some cases a slight bandage round the lower ribs, and under this a strong sedative application over the epigastrium, appear to have done good. Effervescents, with hydrocyanic acid, belladonna, nux vomica, ice, and in some cases, lemon juice, have proved useful. Bismuth and charcoal, where there have been large secretions of acrid mucus accompanied with flatulent eructations, have appeared serviceable. But of all remedies Dr. Greenhalgh places most reliance upon the introduction into the vagina of morphia suppositories, more especially in severe cases, and where an irritable condition, with or without abrasion of the cervix uteri, is found to exist. In such cases he believes little or no reliance can be placed upon remedies taken by the mouth, which he has found rather to aggravate than relieve the vomiting.

In the practice of University College Hospital, Dr. Graily Hewitt generally finds benefit derivable from giving the patient some nourishing article of diet, such as a teacupful of beef-tea, a small sandwich of meat,

a cup of milk, etc., before raising the head from the pillow. The change of posture from the recumbent to the upright position appears to excite the attack when the stomach is empty, but not so much so when the attention of the organ is, so to speak, otherwise occupied. The patient should remain a few minutes or longer in bed after this early meal before attempting to rise.

Dr. Playfair, in King's College Hospital, in not in the habit of treating cases of "morning sickness" much, unless it is unusually severe, beyond carefully regulating the diet, and removing any obvious source of irritation to be met with in the primæ viæ themselves. He is of opinion, that there is much truth in the old belief, that pregnancies without morning sickness are not, as a rule, favourable. He has so frequently noticed that when sickness is entirely absent other and more distressing reflex phenomena, such as syncope, exist to an unusual degree, that he is disposed to look upon the entire absence of nausea as unfavourable. When morning sickness is excessive he has frequently verified the opinion of Dr. Clay and others, that there is some morbid condition of the uterus itself, and has found local treatment, such as the occasional application of leeches to the vulva, or of iodine paint to erosions of the cervix uteri, to be of great service. With regard to actual medicines, he is disposed to place most reliance on the oxalate of cerium, in doses of two grains three times a day. Next to this, effervescing draughts, with hydrocyanic acid, ice for suction *ad libitum*, and the subcutaneous injection of morphia answered best. Pyroxidic spirit has not answered as well as was expected.

In the British Lying-in-Hospital, Dr. Murray adopts the following treatment:

One teaspoonful of sal volatile is given before rising. If nausea occurs during the day, sinapisms are applied to the epigastric region, with a pill containing the oxalate of cerium and camphor, to be taken twice or thrice daily. In one or two cases he has found the morning nausea and vomiting stayed by getting the patient to eat either a biscuit or sandwich sometime during the night, or very early in the morning. Salicine is a drug which he has used with success. He recommends lime-water, in preference to soda-water, to be taken with almost every drink; and has found nitro-muriatic acid, with some bitter infusion very useful.

In the Hospital for Women, Soho Square, Dr. Meadows has found the greatest success from medicines which exercise a decidedly sedative action upon the nerves of the stomach. Regarding the sickness of pregnancy as a purely reflex effect of uterine irritation upon the pneumo-

gastric nerves and solar plexus, Dr. Meadows places most reliance on drugs which diminish the sensibility of those nerves in their peripheral distribution. The tincture of aconite in five to ten minim doses, the tincture of belladonna in ten minim doses, the liquid extract of opium in five minim doses, or the dilute hydrocyanic acid in five minim doses: one or other of these is the remedy which he most commonly and most successfully prescribes. He has also observed marked effects from the oxalate of cerium, or the citrate of bismuth, in five-grain doses. In very intractable cases he has sometimes tried with good effect a small blister about the size of a florin, over the epigastric region, the blistered surface being afterwards dressed with some diluted savin ointment containing one grain of morphine in a drachm.—*Medical Record.*

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## MUSCULAR RHEUMATISM.

In the *Lancet* of March 14, considerable space is devoted to the management in the various London hospitals of the painful and often troublesome affection commonly described as muscular rheumatism. This complaint resembles rheumatism only in being attended by pain, generally consequent on exposure to cold and damp. In St. Mary's Hospital it is treated by stimulants and anodyne liniments, accompanied by vigorous rubbing and kneading of the muscles affected. In the Middlesex Hospital, the management is similar, and alkalies and purgatives are believed to do more harm than good. Belladonna plasters are used sometimes with advantage, together with rest and abundant food. In the Charing-Cross Hospital, Dr. Headland administers bicarbonate of potash freely, and has also much faith in minute doses of belladonna or atrophia, but never gives iodide of potassium. Warm baths and vapour baths are found of service, with purgatives of aloes, turpentine, or croton oil. As a last resource, Dr. Headland blisters and sprinkles morphia over the raw surface. In the King's College Hospital, counter-irritation and diaphoretics constitute the principal treatment. Iodide of potassium is thought favourably of, but the alkalies are not approved. Tonics of iron are found of service in some cases. In St. Thomas's Hospital, saline cathartics, followed by diaphoretics, are found serviceable, aided in severe cases by colchicum, with potash or iodide of potassium. Where there is pleurodynia, quinine and henbane are generally given, in conjunction with stimulating local applications *Medical Record.*

# Canada Medical Journal.

MONTREAL, SEPTEMBER, 1868.

## THE CANADIAN MEDICAL ASSOCIATION.

The annual meeting of the Canadian Medical Association, which is to be held in this city on the second of September instant, has a long roll of most important measures for discussion. Reports are to be submitted on the questions of preliminary education, on the necessity of adopting such means as will ensure a uniform and elevated standard of medical education, and also on the best means of having a uniform system of granting license to practise medicine, surgery, &c., throughout the Dominion of Canada. There can be little doubt that any report emanating from an association of the medical fraternity, will have due weight in any future action of the Legislature, on the subject of the study and practise of the profession of medicine and surgery throughout the Dominion.

It is very desirable that a uniform law should be introduced, bearing on the practise of the profession of medicine in Canada. We fear that perfect uniformity is not attainable, inasmuch as all questions pertaining to education are left in the hands of the Local Legislatures. We would wish to see a medical act introduced before the Dominion Parliament, having a similar tendency and bearing to that which is in force in Great Britain. A general council of medical education and registration for the Dominion, with powers of supervision to inspect the method of teaching and examination in all our educational institutions, would do more to elevate the character of those institutions, and their various exercises, than a continuance of the present varied system of licensing. The General Council should have the power of recommending for registration all graduates or licentiates of those universities or colleges whose curriculum and method of examination shall be deemed sufficient. They should not be an examining body, but a corporation holding a higher office than that of either teacher or examiner. All colleges and universities should examine their own pupils, but if their curriculum or examinations are deemed by the Medical Council to be insufficient or irregular, their graduates or licentiates should not be entitled to enregistration.

The Canadian colleges and universities are seeking recognition from the General Medical Council of Great Britain, and the chief obstacle to that end is the want of supervision. In Great Britain all universities and medical schools are under the control of the General Medical Council. In the matter of preliminary examination, they exact a certain status which has been adopted by all the educational institutions of the mother country, and also by many of those in Canada; those institutions in Canada that have followed the requirements of the General Medical Councils, as regards preliminary education, have received at their hands recognition. We doubt not that, with a general law, which should be operative in all the provinces, giving us a council with similar powers and authority, such supervision and control would be deemed sufficient by the home authorities, and we would at once secure to our graduates and licentiates that desirable recognition which would place our institutions, educationally, on a par with those in the mother country.

The time has arrived when we should come out from our shell, and make known to our friends on the other side of the Atlantic that we have in Canada the men and the means of imparting knowledge in our colleges equal to some, at least, of the institutions of Great Britain, and, furthermore, that our test of proficiency in our students will bear the light of day.

Another most important subject which will be submitted to the meeting, is the report of the Committee on Statistics and Hygiene. It is a lamentable fact that statistical inquiry is with us an impossibility. To arrive at any definite and reliable information of the prevalence in any given district of any class of disease, is simply not attainable, and the reason is, because we have no reliable source from whence to draw information. To arrive at a definite conclusion of the mean duration of life is equally impossible. The influence of climatic changes on disease is another subject on which we can give no information. The whole system of collecting information on these points has to be changed, and we have the admirable system in vogue in other countries, but especially that under the direction of Dr. Farr, the Registrar General for Great Britain, from which to copy. We hope to receive for publication in these columns a well digested report, containing suggestions which will go far to induce our Legislature to introduce a law which will be of lasting benefit.

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## THE DOMINION RIFLE MEETING AT LAPRAIRIE.

The Canada Rifle Association will hold its first Rifle Match on the 15th instant, on the Laprairie Common. It is proposed to place the men in camp, the Government furnishing all necessary camp equipage. The following is an official announcement:

"Laprairie Canada Rifle Association meeting, 15th of September—Volunteers regulations—No volunteer allowed to appear in uniform, or fire with any Government weapon or ammunition unless enrolled on arrival as required. Men enrolled will have supplies furnished. Rations must be purchased."

We trust that arrangements will be made for providing a proper hospital marquee and surgery. We may state that at the Wimbledon meeting in July last there was an unusual amount of sickness, and that, had not the War Office provided for the emergency, it is quite possible that valuable lives would have been sacrificed. We sound the note of warning to our militia authorities, and trust that ample provision will be made with a regular staff of medical officers attached, so that in case of accident or disease they may be prepared to act with promptitude.

If it be desirable to make this an annual gathering, so as to disseminate amongst our volunteers a spirit of rivalry in the use of the rifle, it is necessary that everything should be done to render the arrangments as complete as possible.

Another subject which deserves attention is the dry-earth system for closets and urinals. Last year this system was experimentally tried at the Volunteer Camp at Wimbledon, a few closets only being erected. This year the earth-closet was introduced to the exclusion of all other methods. There were erected at that camp one hundred and forty-eight dry-earth closets and urinals, some fifty of these were used daily by about two thousand men with such marked results, as not to produce the slightest annoyance to sight or smell.

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## VIEW OF THE PARLIAMENT BUILDINGS, OTTAWA.

We beg to call the attention of subscribers to an arrangement entered into by the enterprising publishers of this journal, with Messrs. Burland, Lafricain & Co., the well-known lithographers, whereby subscribers will be entitled to receive a copy of a beautiful cromo-lithograph of the Parliament Buildings at Ottawa, finished in the highest style of art, upon their paying up all arrearage, and also paying the sum of four dollars, which includes the price of the lithograph and of the current volume of the Journal. This arrangement has been made by the Messrs. Dawson Bros. at considerable outlay, as the price of the lithograph alone is the sum asked for it and the fifth volume of the Journal. To those gentlemen who desire to commence the subscription to the *Canada Medical Journal* the same inducement is held out. This arrangement will be held open up to the 1st October next. In speaking of the lithograph,

we can commend it as a most beautifully finished work of art, accurate in all its details, with the exception perhaps of the foreground, which is still in an unfinished state. The artist, however, has adorned the grounds with fountains and walks, a garden, and other et ceteras, which will in course of time add beauty to the already unrivalled buildings. As a Canadian work of art it should be encouraged. Messrs. Burland, Lafricain & Co. have spared no expense in getting up this lithograph. It is a specimen of what can be done in Canada. Like every other place, Montreal alone requires capital and enterprise to enter the lists of competition, and in this instance we must say she has produced a most creditable work. We would beg to call the attention of our readers to the circular on this subject of Messrs. Dawson Bros., which accompanies each number of the Journal.

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## TREATMENT OF HERPEZ ZOSTER.

Dr. Jos. Konrad, in the *Wiener Medizinische Presse*, March 1, 1868, advices painting the parts twice or thrice a day with collodion, and administering an opiate at night. By this simple means he completely cured fifteen cases—all he treated—in four to six days.

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## TREATMENT OF CHOLERA AND EPIDEMIC DIARRHŒA.

Geo. Johnston, M.D. (*Medico-Chirurgical Transactions*), has communicated a paper showing the correctness of his views of the treatment of cholera. The number of cases treated was 375. Of those treated with castor oil alone, 30.45 per cent. died; of those treated with castor oil and the liberal use of stimulants 41.37 per cent. died; of those treated with astringents, stimulants, ice, hypodermic injections, camphor, etc., 71.42 per cent. died. In no case is there reason to suspect that there was any selection of cases made.

The conclusion is drawn, of course, in favour of what is known as the eliminative plan of treatment.

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*Errata.*—In Dr. Pott's article on Obstinate Constipation, caused by eating the fruit of the Wild Raspberry, in the August number. Observe first on page 61, 3rd line, the words "suffering some pain," should be "suffering *severe* pain;" on page 62, 17th line, "produced intense agony induced by his screams," should be "produced intense agony *evidenced* by his screams;" page 62, 3rd line, "inflammation did not extend along the arms," should be "upwards from the arms;" page 62, 40th line, "relieving the arms," should be "*relaxing* the arms;" page 63, 16th line, "a relaxation of the arms," should be "relaxation of the arms," (the article should be left out); page 63, 29th line, "produce a descent of them at last," should be "produce a descent of the contents," ("them at last" should be left out, and the word *contents* inserted); page 63, 37th line, "until operated," should be "until *it* operated."

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*An Essay on the Contagion, Infection, Portability, and Communicability of the Asiatic Cholera in its relations to Quarantine; with a brief History of its Origin and Course in Canada, from* 1832. By W. MARSDEN, A.M., M.D., ex-President and Governor of the College of Physicians and Surgeons, Canada East; Honorary Fellow Medico-Botanical Society, London; Corresponding Fellow Medical Society, London; Honorary Fellow Montreal Pathological Society; Honorary Fellow Berkshire Medical Institute and Lyceum Natural History; Honorary Fellow Medico-Chirurgical Society, New York; Member by Invitation of the American Medical Association, &c., &c., &c.

*(Continued from our last.)*

Dr. Rowand, a distinguished physician, and one of the surgeons of the Marine and Emigrant Hospital of Quebec, was originally appointed one of the Quarantine commissioners, but resigned in consequence of personal affairs requiring his presence at the Red River. On his return from this trip, he kindly furnished me with notes, from which I make some condensed abstracts favouring the doctrine of the infection and contagion.

On crossing the Western Prairies, and when beyond the limits of railroad extension, where habitations are "few and far between," and where the stage-coach or caravan are almost the only means of conveyance, Dr. Rowand traced the cholera on the track of the emigrant passengers all along that route. Cases of Asiatic Cholera had broken out just where they had touched or stopped; while in all the surrounding country, where there had been no intercourse or communication with these emigrants, perfect immunity from the pestilence was enjoyed. The Doctor adds, that the emigrants were Germans, and so were the passengers of the "Glenmanna" and "John Howell," who introduced the disease into Canada; and he believes they were from among the passengers of these unfortunate vessels.

The following extract, which the Dublin *Times* of the fourth of March, 1867, copied from the Belfast *News-Letter*, shows that cholera had appeared in Belfast, following the unerring laws of infection.

### Re-appearance of Cholera in Belfast.

This infectious disease has again made its appearance in Belfast, and already three individuals have died from it. It appears that it was imported in some clothing which was brought over by some visitors from Jersey, where it is still lingering. The facts are as follows: A young lady died of Asiatic Cholera in a house in Jersey on the tenth ult. Three persons who resided in this house came to Belfast a few days after the occurrence, and brought with them several articles of female clothing, which had been in the house for some time. They took up their residence with a family named Hasty, living in 27 Fleet Street. On the 25th ult., a few days after their arrival, one of the children of the family took ill with symptoms of Asiatic Cholera, and died the next day. A second child took ill with the same disease on the 27th ult., and died on the following day. A third child also took ill on the 27th of the same disease and died yesterday. A fourth child of the family also was attacked, and was removed to the Union Hospital, but is considered not likely to recover. The remaining five children of the house have also been removed to the Union Hospital, and placed in a separate ward, in order that their condition may be watched over. The medical gentleman who attended the family has no doubt that the disease was Asiatic Cholera of the most virulent character, and is of opinion that it was imported by the apparel which was brought from Jersey. Mr. Norwood, on hearing of the event, had the children removed to the hospital and got the house thoroughly fumigated inside, to prevent the infection from spreading. As yet no other cases have been reported, and it is to be hoped that if energetic measures are adopted, the disease may be effectually "stamped out."

Had the foregoing plain narration of facts been penned with the sole object of illustrating the infectious nature of cholera clothing, it could hardly have been made stronger. The cases which I have here given in support of the principle of the contagion and infection of Asiatic Cholera are only a very small portion of what I have collected, and ought to make the most inveterate non-contagionist pause and reflect; but a just regard for your space and the time of your readers has compelled me greatly to condense even the facts which I have given, and I will now turn to the Report of the Quarantine commissioners of 1854. They say:

"We may now refer to the case of the "John Howell," shewing, as it

will, from the re-examination of the master and surgeon before the Central Board of Health, as well as from the official return of the Medical Superintendent at Grosse Isle, that this ship had not had cholera on board during the voyage. That at Grosse Isle its passengers, while there, enjoyed unrestrained and familiar intercourse with those of the ship "Glenmanna," which, no doubt can for a moment be entertained, had had cholera on board, before arriving at the Quarantine Station, and that this communication between the passengers of these two vessels may have existed ever since the fifteenth of June. It will be seen that five days after, the first cases of cholera which made their appearance in Canada in 1854, are found among the passengers arriving in the ships "John Howell" and "Glenmanna."

Here we have a painful but imperative duty to perform. This duty, in accepting the trust which Government had confided to us, we have solemnly sworn to execute conscientiously and without fear or partiality. We are, therefore, obliged to declare that the passenger vessel, the "Glenmanna," ought to have been detained at the Quarantine Station a longer period of time than it had been; that the passengers ought to have been separated from those arriving in other vessels, and subjected to a rigid *surveillance*, with a view of detecting at the onset all cases of cholera which might have broken out among the passengers.

The importance of a similar measure will be understood, when we have the declaration of the medical superintendent in his own report, that no vessels (to the exception of three in the early part of the season, and on board of which cholera had made its appearance before leaving the coast of Ireland, and where they had been subjected to some kind of Quarantine) had anchored at Grosse Isle, as having had cholera during the voyage.

When we take into consideration that the "Glenmanna" as well as the "John Howell," *which it infected*, are the vessels which most *unquestionably introduced Asiatic Cholera on our shores, and amidst our population*, after having passed the barrier which Government has wisely instituted as a means of public safety, we cannot refrain from observing that the medical superintendent allowed himself to be deceived by the fallacious declaration of the master and surgeon of the ship in question.

Forty-five persons had been thrown into the sea from on board the "Glenmanna" before arriving at Grosse Isle, and it may be remarked that if the Medical Superintendent who, after his own arrival, had conceived doubts as to the integrity of the report, and had deemed it necessary to depart from his usual practice by exacting a statement under the hand-writing of the surgeon on board, instead of writing it

himself, and under his dictation, had taken the same care as we have to arrive at the truth, he could not have failed in coming to the same conclusions, viz., that several deaths which occurred among the passengers during the voyage from Liverpool to Grosse Isle, had been caused by no other disease than from attacks of Asiatic Cholera, and under all the circumstances, we are constrained to observe that, had this ship been detained a longer time than it was in Quarantine, and subjected as well as the passengers to a perfect disinfection, it is probable that the introduction of cholera into this Province might have been longer delayed.

"The opinions of mankind," the report truly remarks "are less divided than formerly on the contagious nature of Asiatic Cholera, but the law is founded on the assumption that it is a communicable disease, and that all passengers who may have been exposed to its invasion should be subjected to a detention at the Quarantine establishment at Grosse Isle, for so long a period of time as may fulfil the intentions of the legislature, in preventing its introduction into the Province, and consequently the medical superintendent ought necessarily to execute the law in all its integrity and force."

In addition to the above facts we would also refer to the case of the "Pembertons," which arrived at Grosse Isle with one more passenger (a birth having occurred during the voyage) than had embarked in Queenstown, harbour of Cork. There existed no cholera at Queenstown at the time this vessel sailed, but it would seem that some cases had made their appearance at Cork. Six days after this vessel had anchored at the Quarantine grounds, and three days after the passengers had landed at Grosse Isle, one of the number, an emigrant, was attacked and died of cholera. This case, unless one of a spontaneous character, and which we admit, will sometimes occur, cannot be otherwise explained than by contagion and as originating from either of the following cases:—The passengers had received orders to wash their effects, previous to which it became necessary to overhaul and remove clothes which had been long closely confined in their chests and trunks, &c., serving thereby as a *nidus* to the disease.

On this mode of communicability we cannot be unmindful of the many authorities we possess from professional men of great experience and observation, and whose integrity is unimpeachable. They have shown the possibility of contracting cholera through this medium.

In support of this opinion we may quote the following remarks from the report of Drs. Baby and Gull, to the Royal College of Physicians of London. In alluding to the emigrant ship "New York," which in 1849, had arrived at New York from Havre, it is observed: "It is most

probable that the material cause of the disease, the cholera poison, was brought by the emigrants from Europe, and as in one of the ships, all the persons attacked, with one exception, were Germans, the crew altogether escaping, it may be inferred that it was brought by the German emigrants in their clothes, and the captain of the "New York" states that immediately before the outbreak in that vessel, the weather had suddenly become colder, and there was a general over hauling of chests for warmer clothing, and this was succeeded by the prevalence of warmth already noticed. This warmth, together with the state of the air, which would be present in an emigrant ship, would be conditions obviously most favourable to the increase of the morbific matter when once it was set free."

The other mode by which it may be explained is, that the passengers of the "Pembertons" might have contracted the disease at Grosse Isle; "as to the spontaneous character of the first case of cholera from this ship one cannot admit it in the presnt instance, inasmuch as several cases succeeded it at short intervals from each other, and it is readily seen that the same influence was exerted on them all." But we now come to the real solution of the attack of the "Pembertons," which is in these words: "We would also notice the case of the "*Harmony*" *as falling under the same circumstances as the "Pembertons," and the same explanations submitted in the one equally apply to the other.* It cannot, however, be overlooked that the passengers of the "*Harmony*" *occupied the same sheds on the Island, which four weeks before had been inhabited by the passengers of the "Glenmanna,'* and it will also be seen on reference to the deposition of the master of the "Harmony" *that his passengers had indiscriminately mixed with those of other vessels, the "Pembertons" and the "Alfred."*

The report of the Quarantine Commissioners sums up as follows: "Having carefully examined all the facts which have been derived from a large body of evidence, as well as after an attentive study and impartial consideration of the best authorities which have been presented to the medical world on subjects so deeply interesting and important as those confided to our investigation, we have arrived at the following conclusions:

"1st. That Asiatic cholera made it first appearance in the port of Quebec on the twentieth of June last, and from that date extended to Montreal and the Western parts of the Province in the following order:

| | |
|---|---|
| Montreal | 22nd June |
| Kingston | 25th " |
| Hamilton | 24th " |
| Toronto | 26th " |

"2nd. That *the disease has been traced as an importation* to the ships "Glenmanna" and "John Howell," *the first attacks having occurred among the emigrant passengers from on board these ships.*

"3rd. That Asiatic cholera is contagious and communicable by human intercourse, under the circumstances already mentioned, and when once introduced, may become epidemic, when connected with the following defects: overcrowding, dampness, filth, want of ventilation and atmospheric pollution, bad water, natural defects of situation, the impregnation of the sub-soil of cities with organic matters from filthy streets, cesspools and other nuisances. All this confirms what some writer aptly says: that cholera *is no respecter of classes, but a great respecter of localities*; rich and poor suffer alike, and escape alike, according to their mode of living and their observance or violation of the laws of their physical well-being."

I will now briefly notice the Report of the commissioners of Quarantine and the health officer of the port of New York, for 1866, which is a valuable and important document, establishing the decidedly contagious principle of Asiatic cholera.

"How slight a barrier," it says "may act as a sanitary cordon is proved by the fact that not a single case of Asiatic cholera occurred among the cabin passengers of the eighteen cholera vessels that arrived in port in 1866. This was, in all probability, due to the fact that they had *no communication with the steerage passengers*, and above all *did not use the same water-closets.*" Here we have an aggregate of 8501 souls, including the passengers and crews, with 495 deaths on the voyage, who had crossed the broad Atlantic, cabined, cribbed, confined together for periods varying from two weeks (14 days), to two months (62days), and *not one solitary case of Asiatic cholera among the cabin passengers!!!*

To the energetic and judicious action of the Board of Health of New York, and the Quarantine Commissioners of that port, Canada owes its exemption from Asiatic cholera during the past two years. "In what was done by the general government," says the Quarantine Report, "it is respectfully submitted that a service was rendered not to this State alone, but to the whole country. New York is the great commercial metropolis of the nation; whatever affects her affects the country at large. If her commerce is suspended by pestilence, the consequences are felt in every city and village throughout the land. Therefore, whilst our citizens doubtless feel duly grateful for the timely assistance which was thus afforded their officers in the discharge of their duties, they may justly feel that that assistance was simply what the national government owed to the entire people of the country."

If it be not deemed an invidious digression, where all have done so much and so well as the authorities connected with the administration of sanitary measures in New York, I would in justice say, that to Lewis A. Sayre, M.D., the resident physician in 1865, who first sounded the tocsin, and awakened the slumbering inhabitants of Manhattan on the arrival of the "Atlanta,"—to Dr. John Swinburne, the able and estimable Health Officer of the port of New York,—to Elisha Harris, M.D., the scientific painstaking, and courteous Secretary of the Council of Hygiene and Public Health, and to Mr. Schultz, the indefatigable, urbane, and persevering President of the Citizens Association, this country, as well as the United States, owes a lasting debt of gratitude.

Official statistics conclusively establish the superiority of the sanitary system adopted by the Board of Health at New York, to control Asiatic Cholera over every other place. These statistics show that the deaths from cholera in the city of New York, during the year 1866, were only *one and one-fourteenth per thousand*, whereas in Vicksburg, during the same period, they were *forty-six and three-tenths*. A fact that speaks trumpet-tongued in favour of sanitary rule in New York is this: when the Board of Health of that city, with its 827,551 inhabitants, reported *thirty-one deaths from sunstroke* one day in July, the cholera returns for the same day were only three!

When one considers the powerful influence that a high temperature exercises on Asiatic Cholera, there can be no doubt that had New York dealt with the disease as with an epidemic of non-contagious character, the deaths on that day would have counted by hundreds.

Does not the success of New York in this "*stamping out*" of the cholera (as it is very expressively though not very elegantly termed) strongly mark its contagious character? By what human power could we hope to "stamp out" an epidemic dependant upon some particular *constitutio aeris?* For instance, what human means could have been devised to exempt every solitary cabin passenger of the eighteen cholera vessels that arrived in New York in 1866, from influenza, had it broken out on board in lieu of cholera? None! absolutely none.

*(To be continued.)*

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*Case of True Leprosy, with brief remarks.* By R. P. Howard, M.D., L.R.C.S.E. &c., Professor of Theory and Practice Med. McGill University.

True Leprosy or Elephantiasis Græcorum is a very rare disease in Lower Canada in my experience, only two examples of it having come

before me during my connection, in one way or another, with the Montreal General Hospital for the last nineteen years. One of these occurred in the person of a gentlemen of Scotch descent brought up, and I think born, in Montreal, and who, for three or four years before the disease appeared, had resided for several months in the Island of Bermuda; but although the only member of his family similarly affected, I do not venture to assert in the present unsatisfactory state of our knowledge on the subject, that he owes the disease to his circumstances and surroundings in that Island. His was an example of anæsthetic leprosy.

The subject of my present notice belonged to the labouring classes, was a French Canadian, and had never resided out of his native country. So little is practically known of the disease in this country that the gentleman above mentioned consulted many of the leading physicians in Upper and Lower Canada, as well as the writer, and a few in the United States, but the real nature of the malady was not appreciated until the distinguished Brown-Sequard was visited; that eminent man, too, may I venture to submit, might have experienced some doubts in his diagnosis but for his large personal experience in the Mauritius.

The details of the following case, as furnished by my then clinical clerk, now Dr. Roddick, Assistant House Surgeon to the Montreal General Hospital, may merit publication, as perhaps the first example of the disease recorded in any Canadian Journal.

CASE OF LEPROSY.

Oliver Coutourier, æt. 45, born in the vicinity of Montreal, was admitted under Dr. Howard into the General Hospital on the 4th of Feb. 1868, as a case of Rupia.

*History*:—His father, a previously very healthy man, died of cholera some years ago, and his mother died only five years past, at a very advanced age. Of his progenitors, beyond these, he knows comparatively nothing. There were ten children in the family; two brothers have died within a few years, one through rupture of a vessel while lifting a heavy weight, the other of malignant pustule; six of the number are deaf and dumb, but all are hard-working men and women, and in the enjoyment of good health.

The patient himself has been engaged, more or less actively, for many years as a lumberman and hunter, and for weeks and months consecutively has been accustomed to eat nothing in the shape of meat but pork cured with saltpetre, no vegetables, but sufficient bread. In this occupation he would be of course repeatedly wet and not particular as to the cleanliness of his body. He had intermittent fever many years ago, and occasionally, up to the time when the present malady first appeared, he

No. I. Coutourier's right hand - shewing great atrophy of all the fingers, and the claw-like appearance resulting from the wasting of the distal phalanges and the incurvated condition of the nails.

No. 2. Back of left hand - much wasted with Rupial crusts, and patches of dry white insensible skin.

Drawn by Mr. Lewis Balch -

had, as far as can be made out by the symptoms, an epileptic convulsion.

Some nine years ago, after paddling a considerable distance in a canoe, he noticed on the left knee a large blister forming, but thinking it only a gall took no further notice of it, until some few days after it burst, leaving a sore similar to many now on his hands and feet. This disappeared in about five months, and almost immediately another formed on the opposite knee, and ran the same course in about the same time. These sores continued to appear and disappear alternatively, until four years subsequently the hands became affected, and soon afterwards the feet. The nares, two years ago, became dry, and then ulcerated, resulting in destruction of the septum and parts of the walls. He has now consequently frequent and alarming attacks of epistaxis chiefly at night.

*Present Condition*, Feb. 10th:—He presents a cachectic look, and his appearance is made somewhat unsightly by the absence of eyebrows and lashes, and the drooping of the alar cartilages through loss of the septum. The voice is likewise very husky, hoarse, and weak. His frame is large and altogether well proportioned, but from long continued ailment the muscles are more or less atrophied. The mental faculties are unimpaired. When questioned he answers intelligently and with thought. The integument of the eyebrows and eyelids is much thickened and somewhat congested, and both are devoid of hair. The features generally are large, and the integuments of the face massive, imparting a rather repulsive appearance to the man. The larynx has not been examined, but the mucous membrane at the back part of the mouth has a brownish appearance. Both ulnar nerves are enlarged at the elbows, but the right much more than the left. The hands are dry, hard, and scaly, presenting three or four bullæ filled with serum, and several crusts of a brownish colour very like rupial scabs. On removing a crust a circular ulcer is left. The fingers, but especially the thumbs and forefingers, are greatly distorted, there being considerable atrophy of many of the distal phalanges; and the nails are turned in at the ends, very similar to the incurvated condition of advanced phthisis. On the feet the same condition of the skin is found, and likewise an occasional crust on the legs. The bowels are comparatively regular. An examination of the urine shows an absence of albumen, and perhaps a deficiency of urea.

*State of Sensibility*:—With the æsthesiometer it is found that sensation in the eyebrows and integument of the forehead above the external orbital angle is wholly absent on the right side, but in proceeding inwards it gradually appears. On the left side loss of sensation is not generally so evident, but at times it is difficult to say whether there is

really any difference between the sides. About the nose and chin, also, sensibility is very dull. On the tip of the tongue the two points are distinguished only when one-fifth of an inch apart. Of the fingers none, but the little ones possess anything like the normal amount of sensibility; next come the ring fingers, and last of all the thumbs. He does not feel the point of the instrument on the ball of the thumb, or the palm of the hand. On the back of the hand the two points are distinguished at three and a half inches, and on the back of the arm immediately above the wrist at two and a quarter inches. The anæsthesia gradually disappears as the examination is continued upwards, sensation becoming normal at the middle of the upper arm. Altogether, very little if any difference is noticeable in the state of sensibility of the two upper extremeties when compared with each other.

As to the feet, anæsthesia appears to vary somewhat on the two sides; for example, on the inner side of the left sole the points are felt distinctly at about three inches, while in the same place on the right side he is quite unconscious of them. There are, however, isolated spots on both feet where sensibility appears very active, and again a perfectly raw surface on the ball of the right toe can be pricked without causing the least pain or other symptom of sensation. Tickling the soles has not the slightest effect on him. Anæsthesia extends on the outer side of the leg to about the junction of the upper with the middle third, and on the inner side to some two inches below that point. Altogether it is very difficult to define the exact extent of anæsthesia on both legs, but it may be safely said to be about even. There are certain anomalies in the state of sensibility which are quite irreconcilable, and indeed anæsthesia varies considerably at short intervals of time and at various points within a small area.

*Feb.* 10*th.*—Ung. Benz. Zinc Ox. is ordered for the sores, and internally the following draught, three times a day. ℞ Liq. arsenicalis M. V. Vini, ferri, ʒ ij. aquæ ℥ ss. et misc

*Feb.* 13*th.*—He appears more than usually bright to day, but complains bitterly of cold extremities, being unable, with the warmest clothing, to keep them comfortable. At his request, pulv. capsici is given to put in his stockings and gloves. Two large sores on the buttock are to be dressed.

*Feb.* 15.—Has passed a very bad night from the great pain and cold in the feet and legs. The abdomen is noticed to be slightly distended, but no fluctuation can be found. Percussion shows enlargment of the liver and spleen. The hepatic dulness in front extends vertically from the fourth interspace to half an inch above the crest of the ilium, and

transversely to four inches beyond the median line; while behind it is noticed as high as the seventh rib. In front the spleen reaches to within an inch of the left lobe of the liver, above to the eighth interspace and below, to a little betow the twelfth rib. The æsthesiometer elicits little more than was be foreknown.

About the 17th slight febrile symptoms set in; soon after the physical signs of broncho-pneumonia supervened, and he died by apnœa on 27th. The following note was made by the clinical clerk on the 25th: Pulse 110; temperature 101°. The æsthesiometer shows sensations, is more acute than ever before; two points can be distinguished at two inches apart upon the ball of the thumb, and the ulcerated surfaces upon the hands and feet are really sensitive. Anæsthesia extends but a short distance above the ankles. Autopsy, 27 hours after death.

Abdomen—Liver = 6 lbs, much enlarged; very firm, not fatty, appears hypertrophied.

Spleen = 2 lbs 5 oz., contains little blood; dark coloured, firm and tough; sections not very translucent.

Kidneys—Right = 8 oz.—cyst, size of top of little finger in cortex; capsule not adherent; substance easily torn; not granular; rather pale; blood unequally distributed. Left = 7 oz., more amœmic, but in all other respects like the right. The above organs tested with iodine, did not give satisfactory indications of amyloid degeneration.

Chest—Recent lymph upon right pleura and pneumonic consolidations of lower three fourths of corresponding lung. Congestion of left lung. Heart with contents = 25 oz. Decolourized fibrine in the aorta and large vessels. Valves healthy.

Head—Brain = 51 oz., membranes and substance normal, puncta vas. numerous and large. Slight venous congestion of choroid plexuses. Ventricles normal.

*Both* ulnar nerves appear to be considerably enlarged, more especially where they lie behind the inner condyles. One posterior tibial nerve only removed, but it also appeared much larger and firmer than that nerve usually does. Spinal cord not examined.

The above appears to have been an example of Anæsthetic and Tuberculous Leprosy combined, the former features having been much more marked than the latter. The loss and impairment of sensation in the upper and lower extremities: the atrophy of the integument upon the back of the hands and of the fingers, especially of the distal phalanges throughout their structures; the bullæ and insensible indolent sores upon both hands and feet; the distinct enlargement of the ulnar nerve behind the condyles; the absence of sensation in and of hair upon the *nodularly*

hypertrophied eyebrows; the general thickening of the facial integuments, the destruction of the septum nasi and the husky weak voice, form a grouping of symptoms not met with, I think, in any other disease. Savage's definition of leprosy, in 1759, would apply to this case "Facies deformis tuberibus callosis; ozœna; raucedo; cutis elephantina crassa, unctuosa: in extremis artubus anæsthesia."

It was the occurrence of large bullæ and of dark crusts upon the hands and feet, that led me at first sight to suppose the case one of Rupia, but a closer examination at once changed my opinion.

Dr. Carter of Bombay not long ago made the interesting discovery that the nerves of the insensitive tracts in lepra anæsthetica are generally much enlarged by the formation of albumenoid material between the tubules; and he thinks it probable that the disease of the nerve trunks precedes that of the skin; it appears to me, however, as probable that the alterations invade the peripheral terminations of the nerves and the integument before the nerve trunks, for in the two cases which I have seen the anæsthesia was confined at some places to isolated spots of atrophied integument, although the adjacent skin supplied by the same nerve trunk preserved its sensibility and its healthy appearance.

An interesting circumstance noticed in the above case was the increase of sensibility in the affected parts during the pyrexial condition incident to the occurrence of pneumonia.

Leprosy is said to be observed only near the sea-coast, but our patient never resided in the vicinity of salt water; his diet, too, was not fish; but salt pork and bread, a common diet enough amongst our lumbermen, for several months in the year.

It is not generally known that a leper-house and a number of inmates, the subjects of true leprosy, exist in the French settlement of Wacadie, in the northern part of New Brunswick. The first case began in the person of one Ursuli Landré about the year 1815 or 1817. Her husband next became afflicted with it, and so rapidly did the disease increase, that in 1844, some twenty-three or twenty-four cases were under observation; and according to Dr. R. Gordon's report to the Royal College of Physicians, London, in 1862, there were as many as 37 lepers in the New Brunswick Lazaretto at one time. The same report states that the disease had been "on the decrease during the last ten or twelve years." These and many more interesting facts respecting the disease in New Brunswick are contained in a graduation thesis written in 1863 by my friend William Wallace Gordon, M.D., C.M., son of the above mentioned Physician.

9 Beaver Hall Hill, 22nd August, 1868.

*Principal causes of the Mortality of Montreal, and modes of prevention.* By WILLIAM H. MONDELET, M.D., Licentiate of the College of Physicians and Surgeons, C. E.

(*Continued from page* 61.)

His method is to have ventilators both for admission and emission above only. In our variable climate, it is exceedingly rare to find the air perfectly still, wind is always being propelled ends on to a dwelling house, but that it will sensibly press on either the front or the rear. It will be obvious, then, that no matter how the wind may blow, an unequal pressure will be exerted on one or other face of the house, and that the effort at equilibrum will carry a current through the tubes or *conduits* from the windy to the lee side, directly across the upper part of the room to be ventilated.

The friction of this current on the balance of air in the room, very soon sets the mass in motion, revolving on a horizontal axis; part of the introduced air becomes entangled with the revolving mass, and keeps up a supply of pure air to the room; while in like manner a portion of the mass disengages itself, and passes out with the current, thus removing a part of the impure air previously circulating in the room.

Generally, people occupying these rooms become sickly because their strength becomes diminished, and it is known that whatever tends to lower the vitality of individuals or communities, to diminish their power to resist disease, acts directly to increase the susceptibility to any epidemic, and it therefore follows, that the more perfect the sanitary condition of a city or community—having regard not only to the common nuisance, so called, but also to the general social condition—the more perfect will be the protection from cholera or any other disease of like epidemic form, and *vice versa*. Nature, ever vigilant for the preservation of her offspring, is unceasingly endeavouring to remedy these sources of disease and decay, by pouring in through every aperture a fresh supply of air to replace that which has become effete or deleterious. Among the wealthier class, ample provisions are made for the introduction of fresh air; but among our poor, their means cannot suffice for this luxury, and as a natural consequence their lives are the first sacrificed on the visit of any epidemic. Dr. Arnot says, that in England the apartments with their open chimneys, may be compared to aerial funnels, constantly pouring out their warm air through a large opening constantly requiring to be replenished.

The subject of warming and ventilating houses, and especially large establishments, has lately received great attention. Overcrowding, im-

perfect ventilation, and want of cleanliness, are three conditions usually associated, and may be designated by the single term "crowd poisoning."

The air of crowded habitations becomes contaminated through emanations given off, during respiration, through effluvia from the skin, and by the decomposition of various excreta, are sources of deadly mischief. The effects of overcrowding are not only manifested by the increased violence and the adynamic character of all diseases occuring among the exposed, but the development and severity of the adynamic fevers appear particularly connected with this cause; and again to the organic matter emanating from the human body, more than to any other cause, the injurious results of overcrowding are to be ascribed.

The proofs are ample that the emanations from the human body are of a deadly deleterious character, when present in large amounts, in the atmosphere which is inhaled. They are absorbed by the clothing and even the walls of the room take them up, and retain them for a long time. If animals be kept crowded together in ill-ventilated rooms, they speedily sicken. The continued respiration of an atmosphere charged with the exhalations of the lungs and skin is the most potent of all the predisposing causes of disease (*Carpenter.*)

The functions of the skin upon which physiologists lay so great stress, are here almost entirely unperformed, and hence we have gastric disturbances and diarrhœas with suppression of that aeration of blood, that true respiration, which physiologists tell us, takes place through the skin. Hence the lungs are overtaxed and congestions are induced.

### MODES NECESSARY FOR THE PREVENTION OF DISEASE.

Now, as regards the modes necessary and preventive against disease originating from these bad effects already mentioned, a few precautionary rules and duties, such as the following, should be followed in the event of the approach of cholera or any other disease.

Pure air and cleanliness are the required remedies for its prevention.

Particular attention should be given to each one's premises, their cleanliness, ventilation or disinfection, and allow no overcrowding in houses. Cellars, yards, vaults, and sinks should be kept clean. The walls of the house should be whitewashed, as also cellars, fences, out-houses, shops, factories, store-houses, and every place about the house where mould or mildew form. It keeps the walls dry, sweet and clean, and prevents the accumulation of moisture, which promotes putrefaction, giving rise to *fungi*, which are thought by many to be a specific cause of disease.

The collection of coal ashes, mixed with kitchen garbage, slops, and

stagnant water, and to avoid semi-solid or liquid filth anywhere about the premises.

Should any one of the family become sick, the bed pans should not only be emptied immediately, but thoroughly washed, disinfected and aired.

The patient should be kept as clean as circumstances will allow.

From the latest investigations, it has been found that some physicians are of the opinion that cholera is neither infectious nor contagious, that it cannot be propagated by being near the sick, nor by inhaling the secretions or excretions from bodies of the sick or the dead.

The disease is epidemic, and cannot be restrained or controlled in its progress by *quarantines* or *cordons* of any kind. It can be controlled by temperance, chastity, and above all, by perfect cleanliness, and by these only.

Putrefaction and effluvia from effete organic matter, are among the most active and preventable of the localizing causes of cholera and fevers. To prevent such evils and nuisances, and destroy noxious exhalations, is the chief object of all the processes of cleansing and disinfecting.

Water is the universal agent for cleansing clothes. Washing, scrubbing, and flushing as already mentioned, will never be properly appreciated until the relation of these homely duties, to the prevention of infection and disease, is more generally understood. Sewers, house-drains, water-pipes, and water-closets, should be frequently flushed with water. The largest practicable volume for thorough cleansing water-closets, privies, and water pipes in houses, should be flushed in this manner every day.

Infected clothing, and the utensils used in the sick room, should be washed and scalded in hot water, the moment they are removed from use. In the advice promulgated by the Privy Council of Great Britain, with reference to guarding against cholera, it is recommended that the clothing of the sick, with that disease, should be immediately plunged in boiling water, or soaked in a solution of chloride of lime. The latter is a powerful disinfectant, and if boiling heat cannot at once be applied to the contaminated garments, permanganante of potash should be used.

### VENTILATION OF SICK APARTMENTS.

All premises, particularly sleeping apartments and cellars, should be thoroughly ventilated. Ventilation is no less a purifier than water. It cleanses by oxidising and drying. The windows should be hoisted during the day in fine weather, from 10 o'clock a.m., to four p.m., that the rooms may have the benefit of sunlight and free circulation of pure air. During the remaining hours of the day, and through the night, the win-

dows should be shut. When the weather is cool or rainy, a fire should be kept up in the house in order to prevent dampness.

### DISINFECTANTS TO BE USED.

Disinfectants are equally important, they arrest putrefaction and destroy noxious gasses, but in no instance should they be employed as a substitute for a pure atmosphere. They are simply aids in restoring and preserving healthful purity, and not substitutes for cleanliness and pure air.

They may be employed in cellars, yards, privies, vaults, sinks, water closets, sick rooms, bed pans, stables, and in other places about the premises, or wherever practicable, when there are offensive odours emitted.

"*Quicklime.*"—To arrest putrefaction, to act as a rapid dryer, and to decompose moist and hurtful effluvia, the dry lime should be strewed upon the earth, and distributed in shallow vessels.

*Chlorine gas* is also used advantageously, it being given off from the chloride of lime. In the ordinary emptying of privies or cesspools, use may be made of sulphate of iron, chloride of zinc or sulphate of copper. But when disease is present, it is best to use the lime.

When it is desirable to disinfect before throwing away the evacuations from the bowels of those suffering from certain diseases, the disinfectant should be put in the night stool or bed-pan when about to be used by the patient.

Heaps of manure or other filth, if it be impossible or inexpedient to remove them, should be covered to the depth of two or three inches with a layer of freshly burnt vegetable charcoal in powder. Freshly burnt lime may be used in the same way, but is less effectual than charcoal. If neither charcoal nor lime be at hand, the filth should be covered with a layer, some inches thick, of clean dry earth.

Earth near dwellings, if it has become offensive or foul by the soakage of decaying animal or vegetable matter, should be treated on the same plan.

Drains and ditches are best treated with chloride of lime or percolrate of iron.

Linen and wearing apparel requiring to be disinfected, should without delay, be set to soak in water containing one ounce of charcoal to every gallon of water. Or the articles in question may be plunged at once into boiling water, and afterwards when at wash, be actually boiled in the washing water. Woollens, bedding, or clothing, which cannot be

washed, may be disinfected by exposure for two or more hours, in chambers constructed for the purpose to a temperature of 200 to 500 Farenheit.

For the disinfection of interior of houses, the ceilings and walls should be washed with quicklime water. The wood work should be thoroughly cleansed with soap and water, and subsequently washed with a solution of ca. cl.; in fact, all the apartments should be kept in perfect cleanliness.

### PERSONAL DUTIES.

Personal cleanliness and attention to clothing should be strictly observed. If convenient, bathing, every day, should form one of the principal duties as regards cleanliness. A man's health entirely depends on the attention he gives to the cleanliness of his body, it maintains the limbs in their pliancy, the skin in its softness, the complexion in its lustre, the eyes in their brightness, the teeth in their purity, and the constitution in its fairest vigour. To promote cleanliness, nothing better than bathing can be recommended. Tepid baths remove all corporeal impurities, remove cutaneous obstructions, and while the surface of the body is preserved in its original likeness, many threatening disorders are removed or prevented. By these means, the women in the East render their skin softer than that of the tenderest babes in this climate, and preserve their health, which sedentary confinement would otherwise destroy. This delightful and delicate oriental fashion has spread itself all over the continent, and in America mostly every house has a bath. Another important condition for preserving a healthy skin is to avoid as much as possible, taking medicine to evacuate the bowels; but no pains should be spared in regulating the diet and exercise so as to obtain it.

The guides to regulate us in the use of baths, generally, are the temperature and sensibility of the skin. Bathing acts as a detergent, cleansing the skin from adherent impurities, and thus enables this organ to perform, with more effect, its various functions.

It calls into additional exercise the heart and bloodvessels, particularly the capillaries both of the skin and of all the internal tissues and organs. In cold bathing, the increased action of the heart and capillaries is secondary to a state of depression, and is dependent very much on the state of the temperature of the atmosphere of the room, and the degree of muscular or bodily exercise, subsequently to the bath. In hot bathing, the excitement amounting to increased action of the heart and capillaries is direct and immediate.

Intermediate between the two latter, is the warm bath, which can hardly be said to increase the heart's action. Its impression on the nervous system is of an analagous nature.

In order that bathing have especially its desired effect, there must be transition from cold to hot, as using flesh brushes, or Turkish towels, to cause increased action of the heart, and thus produce increased circulation.

Swimming is an active exercise by which respiration and muscular movements are greatly accelerated, and the evolution of caloric, as a consequence, induced. It is far healthier, and more benefit is got from motion in the water, rather than remaining still.

The conditions for bathing in health are "imperative" and "conditional."

The first applies to all kinds of baths. The second depends upon the particular kind. Of the former, it is required that the process of digestion at least as far as the stomach is empty, as before breakfast, or before dinner, or late in the evening, provided in the last case that a slight dinner has been eaten not far from the middle of the day.

A neglect of this rule has caused great mischief both in the use of the domestic as well as the sea bath. Some people choose the coolest part of the afternoon for bathing, before digestion is completed. A short time ought to elapse after a bath before sitting down to a meal. Time should be given to the digestive mucous membrane, as well as the skin, to recover from the excitement, whether it be direct, as after the cold bath, or indirect as after the hot bath. Persons arising in the morning have necessarily accumulated a certain amount of heat in their bodies, and should they not feel strong enough to resist the effects of the cold bath, at that time, the best time for them is a little before noon. Numerous affections, such as erisypelas, rheumatism, gout, colds, and a hundred other evils, particularly all sorts of cutaneous and nervous disorders, might be alleviated, if not prevented, by a proper attention to bathing.

The inhabitants of countries in which the bath is constantly used, anxiously seek with confidence of getting rid of all such complaints, and they are rarely disappointed. I hardly know any act of benevolence more essential to the comfort of the community, than that of establishing, by public benefaction, the use of baths for the poor in large cities and towns. The lives of many might be saved by them. In England, they are considered only as articles of luxury, yet throughout the vast empire of Russia, through all Finland, Lapland, Sweden, and Norway, there is no cottage so poor, no hut so destitute, but it possesses its vapour bath, in which all its inhabitants, every Saturday at least, and every day in case of sickness, experience comfort and salubrity. The houses of our higher classes are invariably fitted up with accommodations for hot and cold bathing: portable baths or the sponge. A plunge principle is more

common in the dwellings of the middle classes, and deficient as we are, yet still within the last few years a building has been erected called the "floating bath," at which the masses may enjoy a bath for a trifle of their weekly earnings. It were greatly to be wished that these establishments were increased tenfold, and that some public fund were raised for their establishment and partial maintenance. We have abundance of fuel for heating in general, a fair supply of water: and it is difficult to account for the tardy process in this department of social economics.

### CONCLUSION.

I might have given the foregoing observations a more extended development, were it not that I fear I have already transcended the limits of a Thesis. Were I a professor, gifted with a mind able largely to grasp with the subject, and stored with all the knowledge required to do it justice, I certainly would go more fully into it. Having, of course, no pretensions to more fitness to treat of such important matters, than a student is supposed to have acquired by means of hard study and a liberal ample reference to such works of Medical and Practical character as he may have had access to, I hereby close my Thesis. I have tried to make myself understood, and although, I must confess, that the subject I have so undertaken to expound is one of no little difficulty, I have no other apology to offer for having undertaken it, than my desire to call attention to considerations of public interest, which I consider every member of the community should be especially instructed upon.

I have laboured both in that view, and in my own interest, and hope that when this my thesis will be read at the close of my medical studies, by the distinguished Professor, whose duty it will be to pass his judgment upon it, he will remember that the criterion must not be exclusively, his eminent professional standing, but the humble, imperfect but zealous and sincere endeavours of a student to do a good thing, and at the same time, perform what the rules of the institution prescribes he should effect, previous to being admitted a member of the noble profession he is ambitious of reaching.

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## LONDON CORRESPONDENCE.

The meeting of the British Association for the advancement of Science was this year held in the City of Norwich, and on the whole was a successful one, although not so numerously attended as last year at Dundee. The town is remarkable for the great number of fine old

churches, which completely supply the spiritual wants of the inhabitants. Besides, there is the fine old cathedral, in magnificent preservation, and one of the most ancient in the Kingdom. It was never better filled, nor had a more learned congregation since it was constructed, than on the Sunday during the meeting of the Association. In the morning a sermon was delivered by the Dean of Carle, in a marvellously eloquent manner, and with an amount of vociferous gesticulation that astonished his hearers. We need not say that he is an Irishman, and a perfect orator; he showed conclusively that the great truths of science are not antagonistic to religion, and pointed to the large number of eminent divines who had lent their aid in the discoveries of science. He was followed in the afternoon by Canon Heaviside, who preached a sermon in aid of the funds of the Norfolk and Norwich Hospital, and a hundred pounds was collected by his convincing arguments. The Mayor and Corporation were present on the latter occasion, in their robes of office, preceded by mace and other bearers. We saw several operations for stone at this hospital, by Mr. Cadge and others, which had been served for the occasion, and afterwards inspected the museum and wards. Without exception we pronounce the Norwich Hospital to be the cleanest and probably the best arranged and healthiest in the Kingdom. Very likely everything had been arranged for the visit of the Association, but we understood that this hospital was the pet play-thing of the entire county. The museum, too, was a model one, all the preparations were in wall cases with glass doors, and looked as clean and fresh as if put up yesterday. The calculi, for which the museum is celebrated, were preserved in flat cases, all numbered and ticketed; it is said to be the finest collection of calculi in England, which is probably true, unless now excelled by the College of Surgeons in London. As a record of our visit, all the visitors were requested to leave their autographs in the book assigned for the purpose. This is a practice that is very prevalent in this country. Besides the medical men of the place on the occasion of these operations, we noticed the venerable Dr. Christison, Dr. Hughes Bennett, Sir James Simpson, of Edinburgh, Mr. E. Cooper of Norwich, Sir Duncan Gibb, Dr. Crisp of London, Dr. Collingwood, Dr. Richardson, Dr. Humphrey of Cambridge, Prof. Broca of Paris, and several others.

These meetings of the Association are always interesting, the present was even more so than many of its predecessors. Never was there such an abundance of papers in the Physiological Department, and all could not be read. We will touch upon three or four of the more important, and mention the subjects of the others.

Aphasia was one of the most important subjects, and was comprised in the three following papers: The Physiology of Language, by Dr. Hughlins Jackson; on the seat of the Faculty of Articulate Language, by Professor Paul Broca; on the Power of Utterance in respect of its Cerebral Bearings and Causes, by Mr. R. Dunn.

The cause of Aphasia was discovered by Broca in 1861. He observed two distinct facts: when speech was absent from Aphasia, there was always some lesion of the brain; and secondly, this lesion or alteration was almost always in the left hemisphere of the brain. At first he believed it was always on the left side, but it is now known to occur, perhaps once in fifty cases, on the right side. It was therefore exceptional. He noticed thirdly, that the part of the brain involved was almost invariably part of the third convolution. He had given numerous proofs of this. Traumatic injuries went to prove that the left and not the right side affects speech, when the part described is involved. In pathological cases the lesion is almost constant on the left side. Exceptions were rare; sometimes the lesion was on the right side, and sometimes neither on the right or left, but very near to the third convolution on the left. In summing up, he remarked that the seat of articulate language is at the posterior part of the third convolution; this convolution possesses the same function on both sides, but why aphasia occurred by lesions on the left side and not on the right was still unsolved. He thought perhaps it might be from some condition analgous to that of right handed, which might depend upon the more rapid development of the brain *in utero* on the left than on the right side.

There was a good deal of discussion on the subject of these papers. Dr. Bateman, of Norwich, had collected seventy-three cases of aphasia, with autopsies in twenty-seven. In thirteen there were lesions elsewhere than in the anterior lobes; in five none at all. There were only five in favour of M. Broca's theory. Professor Bennett believed that the left side of the brain received more blood than the right, which possibly might explain why the left side exerted such an influence upon the faculty of speech. Sir Duncan Gibb mentioned that in functional aphonia, he had found the left side of the larynx at fault in about 75 per cent. Professor Humphrey acknowledged that he was prejudiced against Prof. Broca's theory; he was in favour of unity in the brain as a whole, and not to the location of organs. There were other speakers. Professor Broca explained away the objections to his theory brought forward by Dr. Bateman.

Dr. B. W. Richardson, whom we may call a prolific contributor to science, brought forward several subjects of novelty and interest. One

was the transmission of sight through animal bodies. By means of a powerful lamp he has been enabled to distinguish in thin and young subjects the motion of the heart and of the lungs, whilst those organs were under the influence of some of the bodies belonging to the ethyl and methyl series. In the child he has observed the bones of the arm and of the wrist; the outline of the heart; and some other parts. All his experiments are curious and no doubt interesting, but practically we fear of little value. Light applied to the study of transparent structures for microscopic investigation is no new thing, and we commonly see the circulation in this way in the frog's foot, tail of the newt, branchiae of small fish, and the entire circulation in the newly hatched salmon. He contributed a report on the physical action of the methyl series; and a paper on some effects of extreme cold on nervous action. He showed that under the influence of extreme cold on the brain and spinal cord, the extreme effect of such poisons as strychnine could be suspended entirely for a time. He thought that this raised a hope that in such diseases as tetanus, a new and successful mode of treatment might be gradually evolved. Many of his experiments, such as freezing the brain in the living animal, might be carried out with advantage in such a climate as Canada in the winter time.

Dr. Crisp, this year, contributed several papers of interest, evincing great research, indomitable industry, and considerable labour. He is an example to rising physiologists and naturalists, and never allows an opportunity to go by, of either acquiring knowledge, or contributing it for the benefit of science. He, (as well as Dr. Richardson, and your correspondent) is a member of the Natural History Society of Montreal, an honour which he occasionally makes use of. One of his papers was on the skeleton of a Fossil whale, thirty-one feet long, recently found on the East coast of Suffolk. Fortunately the discovery was made on his brother's farm in the Chillesford clays, and it allowed him to disinter the animal at his leisure, to make drawings and measurements, and to determine the species to which it belonged. Whilst on the subject of whales, we may mention that the museum of the College of Surgeons in London, contains two fine large skeletons, suspended from the ceiling; one of them is a sperm whale upwards of thirty feet long, and its suspension produces a fine general effect.

Dr. Crisp read papers on the Alimentary canal of the Tasmanian wolf; on the visceral anatomy of the gorilla; and on the relative weight, form and colour of the eye, in vertebrate animals. This last was illustrated by the eyes of more than 400 birds alone. His fifth paper was on the statistics of pulmonary consumption in 623 districts of England and Wales.

The following list will be instructive, as showing the nature and variety of some of the subjects brought forward :—

Report on the Action of Mercury on the Secretion of Bile. By Professor Bennett.

Report on the investigation of Animal Substances, with the Spectroscope. By Mr. Ray, Lankester.

On the Homologies and Notation of the Teeth of Mammalia. By Mr. W. H. Flower.

Flukes from the Indian Elephant, with Remarks on their Affinities. By Dr. Cobbold.

On the Physiology of Pain. By Prof. Rolleston: and on the Pectorales Muscles. By Prof. Rolleston.

On Certain Effects of Alcohol on the Pulse. By Dr. Anstie.

Electrolysis in the Mouth. By Mr. Bridgman.

On Sixteen Eshimo Crania. By Professor Rolleston.

On the Connection between Chemical Constitution and Physiological Activity. By Dr. Crum Brown.

On the Comparative Anatomy and Homologies of the Atlas and Axis. By Dr. McAlister.

Is the Eustachian Tube Opened or Shut in Swallowing? and On the Relation of the Limbs to the Segments of the Body. By Prof. Clelland.

Besides these, there was a number of papers on Zoology and Botany, of which the following may be mentioned, as being of interest to the Canadian naturalist.

On the Extinction of the Great Bustard in Norfolk and Suffolk. By Mr. H. Stevenson.

The Zoological Aspect of the Game Laws. By Mr. Alfred Newton.

On the Crested or Top-knotted Turkey. By Mr. A. D. Bartlett.

On the Distributiou of the Principal Timber Trees of India, and the Progress of Forest Conservancy. By Dr. W. Cleghorn.

On the Wellingtonea Gigantea, with Remarks on its Form and Growth. By Mr. John Hogg.

On Some Organisms, which live at the bottom of the North Atlantic, depths of 6,000 to 1,500 feet. By Professor Huxley.

These meetings of the Association always exercise a salutary influence upon the mind, and one returns home certainly a wiser man, somewhat the worse, however, for the wear and tear of his bodily frame, which is not by any means alleviated by the excessive amount of feeding which is forced upon the alimentary organs.

By a visit to the Museum of Natural History at Norwich, we were enabled to identify a number of elephantine and other remains in our pos-

session from the coasts of Norfolk, which are destined, ere very long, to find their way into the Museum of the Natural History Society of Montreal.

I shall reserve a few observations upon the International Congress of Prehistoric Achæology and Anthropology, which met at the same time and place as the British Association, for my next letter.

London, 10th September, 1868.

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## FIRST ANNUAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

The first annual meeting of this association, which was formed in Quebec in October, 1867, was held in the rooms of the Natural History Society of Montreal, on the 2nd, 3rd and 4th of September, a large number being present, and taking part in the proceedings. The various committees appointed at Quebec met on Tuesday the 1st of September, and most of them were ready with their reports immediately after the opening of the Association; one or two were, however, unable to report until the second day of meeting. The following members recorded their names in the registrar's book. Several were in attendance, however, who neglected to enter their names.

Ulric Arcand, Becancour; W. Bayard, St. John, N.B.; Pierre Beaubien, Montreal; A. G. Belleau, Quebec; LeBaron Botsford, St. John, N.B.; Llewellyn Brock, Toronto; J. B. Blanchet, Quebec; G. H. Boulter, Stirling, Ont.; Wm. Henry Brouse, Prescott; H. Blanchet, Quebec; G. W. Bingham, Ayr, Ont.; John Bell, Montreal; W. E. Bessey, Montreal; A. Brodeur, Roxton Falls; A. T. Brosseau, Montreal; C. V. Berryman, Toronto; J. G. Bibaud, Montreal; Edouard S. Belleau, St. Michel; Rufus S. Black, Halifax, N.S.; Alfred Beauded, Coté du Lac; Edwin Bayard, St. John, N.B.; G. W. Campbell, Montreal; F. W. Campbell, Montreal; W. Canniff, Belleville; Joseph Coté, St. Valier; Tiburce Charest, Beauport; Joshua Chamberlin, Frelighsburg; V. J. B. Chagnon, St. Pie, R. A. Corbett, Port Hope; Joseph P. L. Desrosiers, Montreal; Adolphe Dagenais, Montreal; F. DuSault, Quebec; C. L. DeMartigny, Beauharnois; G. P. DeGrassi, Toronto; J. A. Duchesneau, Terrebonne; Alphonse Deschamps, Montreal; A. H. David, Montreal; Napoleon Duchesnois, Varennes; L. A. E. Desjardins, Montreal; G. S. DeBonald, Montreal; R. Edmonson, Brockville; John Erskine, Waterloo; G. E. Fenwick, Montreal; A. G. Fenwick, Three Rivers; W. Fuller, Montreal; L. A. Fortier, St. Clet; J. E. Fitzpatrick, Baie St. Paul; W.

Fraser, Montreal; Samuel Henry Fee, Kingston; A. A. Ferguson, Franklin; Geo. Fleury, St. Leon; J. B. Garneau, Ste. Anne de la Perade; Amedée Gaboury, St. Martin; Romuald Gariepy, Montreal; G. P. Girdwood, Montreal; R. T. Godfrey, Montreal; Alphonse Hebert, Quebec; R. P. Howard, Montreal; W. H. Hingston, Montreal; W. S. Harding, St. John, N.B.; G. A. Hamilton, do.; Edward M. Hodder, Toronto; Andrew W. Hamilton, Melbourne; W. J. Henry, Ottawa; N. Jacques, St. Hyacinthe; A. H. Johnson, Portsmouth; Charles Johnston, St. John, N.B.; R. H. Kennedy, Montreal; George E. S. Keater, St. John, N.B.; C. E. Lemieux, Quebec; Joseph Leman, Montreal; P. LaRue, St. Augustin; J. A. M. Lapierre, St. Jean Baptiste; C. A. Lesage, St. Gregoire le Grand; B. H. LeBlanc, Pointe St. Charles: Gédéon LaRocque, Longueil; A. B. LaRocque, Montreal; G. A. Masson, Laprairie; P. Munro, Montreal; E. Munro, Montreal; P. E. Mount, Montreal; J. W. Mount, Acton Vale; W. Marsden, Quebec; R. Macdonnell, Montreal; A. Moran, Halifax, N.S.; DeWitt H. Martyn, Kincardine; D. C. MacCallum, Montreal; M. R. Meigs, Bedford; W. B. Malloch, Montreal; Richard Markell, Aultsville; P. O'Leary, Montreal; Joseph Painchaud, Quebec; C. F. Painchaud, Varennes; Charles Picault, Montreal; E G. Provost, Sorel; G. J. Potts, Belleville; P. Provost, Memromcook, N.B.; John W. Pickup, Beauport; Frederick Paré, Sherbrooke; F. X. Perreault, Pointe aux Trembles, of Montreal; Hector Peltier, Montreal; J. C. Poitevin, St. Martin; R. F. Rinfret, Quebec; Ed. Rousseau, Quebec; Jules Robitaille, Quebec; J. P. Rottot, Montreal; Edmond Robillaird, Montreal; A. M. Roseburgh, Toronto; James H. Richardson, Toronto; G. E. Roy, Boucherville; Arthur Ricard, Montreal; Edward T. Roberts, Hawkesbury; John Reddy, Montreal; George Ross, Montreal; John J. Ross, Ste. Anne de la Perade; H. C. Rugg, Compton; W. E. Scott, Montreal; Samuel Benjamin Schmidt, Montreal; Charles Smallwood, Montreal; J. T. Steves, St. John, N.B.; C. I. Samson, Quebec; Robert Stewart, Belleville; M. Sullivan, Kingston; F. W. Sheriff, Huntingdon; W. Sutherland, Montreal; J. S. Scott, Toronto; Colin Sewell, Montreal; A. C. Sinclair, Martintown; John B. Selley, Montreal; Charles Tupper, C. B., Halifax, N. S.; Robert Thompson, Montreal; Charles F. F. Trestler, Montreal; Eugene Hercule Trudel, Montreal; M. Turcot, St. Hyacinthe; James Thorburn, Toronto; J. M. Turcot, Montreal; Robert Thibodo, Belleville; H. Therien, Rivière David; P. O. Tessier, Quebec; E. H. Trenholme, Montreal; Alfred Vilbon, Montreal; Thomas B. Wheeler, Montreal; Edmund D. Worthington, Sherbrooke; W. N. Wickwire, Halifax, N.S.; Octavius Yates, Kingston;

FIRST DAY,—*2nd September.*

Shortly before eleven o'clock the President of the Association, the Hon. Dr. Charles Tupper, C.B., took the chair; at the same time the Vice-Presidents of the Association for the various provinces also took seats on the platform. They were Dr. LeBaron Botsford, of St. John, New Brunswick; Dr. Rufus S. Black, of Halifax, Nova Scotia; Dr. E. M. Hodder, of Toronto, Ontario; Dr. Hector Peltier, of Montreal, Province of Quebec. Dr. Painchaud, of Quebec, now over 80 years of age, who was present, was also requested to occupy a seat on the platform.

The minutes of the last session held at Quebec, on the 9th October, 1867, were read by the general Secretary, Dr. A. G. Belleau, and approved.

On the order for the reception of members by invitation.

The PRESIDENT said that as the Association was cosmopolitan in its character, and recognized no distinction of nationality, they had been kindly invited by the American Medical Association to send a delegate to their last meeting. During, however, his (the President's) absence in England, no action was taken on that invitation. But the American Medical Association, at their meeting in May last, had appointed Dr. M. S. Davis, of Chicago, as a delegate to this Convention. A letter had been received from Dr. Davis stating that he had intended to be present, but circumstances beyond his control had arisen which, to his great regret, had prevented his attendance. He expessed, however, his satisfaction at the formation of a Canadian Medical Association, and closed by tendering, in the name of his Association, his best wishes for its success. The President, on reading this letter, spoke of the importance of a generous interchange of courtesies with their professional brethren on the other side of the lines. Such an intercourse would be most beneficial, and he trusted before this Association adjourned arrangements would be made by which this Association would be represented at the next meeting of the American Medical Association.

Dr. HINGSTON then read letters from Dr. Tache and Dr. Van Courtlandt, Ottawa, and a letter from the Montreal Literary Club, placing their Club House at the disposal of the members of the Convention during their stay in the city.

THE PRESIDENT'S ADDRESS.

Hon. Dr. TUPPER, the President, on rising, was greeted with cheers. He said: Gentlemen. The sixth order of the day, which has been placed in my hand since I entered this room, is the Annual Address of the President. Standing, as I do, in the presence of members of the pro-

fession so much more distinguished in every branch of the profession than myself, though somewhat accustomed to public speaking, I should have great hesitation in attempting to give an annual address, were it not that I know that the motto of the very honorable profession to which we belong is everywhere recognized to be "Deeds, not words." Hence you will not expect from me any lengthened observations in relation to subjects of which so many of you are infinitely better qualified to treat than the gentleman upon whom you have conferred the great and undeserved honour of making him the first President of the Association. But in retiring from the chair in which you have so kindly placed me, I would do great injustice to my own feelings if I did not avail myself of this opportunity to express to you the great importance I attach to this meeting of the Association. In October last, in Quebec, the Association was formed by some one hundred and sixty-six prominent members of the medical profession, representing all parts of the Dominion of Canada. At a time when a political Union of the Provinces had been accomplished it was thought advisable to unite more closely the members of the profession in the Provinces, so that they might become better acquainted with each other, and might consult respecting the best means of elevating the profession and advancing its interests, and thereby advancing the interests of the people of this great Dominion. The business of the first meeting was necessarily of a preliminary character. To committees of able and intelligent members of the profession was entrusted the duty of submitting, at this most important meeting of the Association, the results of their deliberations, in order that the great body of the Association might deliberate upon the important matters presented to them, and take such measures as they believe would conduce to the advancement of the great object they had in view. I say I would do great injustice to my own feelings if I did not avail myself of an occasion like this to express the deep importance which, in my judgment, attaches to this meeting—an importance to which my feeble language cannot do adequate justice. I regard it as important, because I hold it to be a meeting of members of a profession the most noble, the most unselfish, and the most influential of any secular profession or calling. (Cheers.) The most noble, because our lives are devoted to the God-like work of relieving human suffering, and of contributing to that which is felt to be the most important object—not only the relief of human suffering, but the preservation of human life, whenever it is possible that human means may aid in its preservation. The most unselfish, because it is the only profession which, I believe, uniformly gives its untiring services, without fee or reward, wherever suffering humanity demands

attention and consideration at our hands. (Cheers.) The most influential, because, knowing, as it does, no distinction of creed, no distinction of nationality, no distinction of class, no distinction of party, the members of our profession form the connecting link between all creeds, all nationalities, all parties, and all classes; requiring, as they do, a liberal education, in order to the successful discharge of the high duties of their profession, no ordinary amount of talent; passing, as they do, from one class to another, from members of one political party to another, they have an opportunity of exercising a moral and political influence which I believe is fully admitted to be certainly second to that of no other profession. (Applause.) It is not strange that, engaged as they are in the relief of suffering humanity, connected as they are with that which bears most deeply and most seriously upon the human mind of anything that can bear upon it, that they should acquire the influence they do. Who can witness the anxiety with which the parent, husband, brother, sister or friend, turns to the medical adviser, without knowing and appreciating the immense influence that he must necessarily and naturally acquire? He is looked for not only to relieve the body, but also to relieve that deep, mental anxiety, which perhaps is greater than any other feeling that the human mind can experience. It is this which gives the medical profession an ascendancy and an influence which devolves upon them a responsibility more deep and more important than it is possible for me to express in any language I can offer. It is necessary not only that members of this profession should be learned, in order to discharge the important duties of a profession which requires the deepest and most accurate knowledge, but they should also be good and patriotic—inspired by a lofty patriotism that will prompt them to avail themselves of the great opportunity that Providence has thrown in their way of advancing the best interests of their country, and to do all they can to elevate, intellectually and morally, the communities in which they are placed. (Cheers.) The members of the medical profession are oftentimes without those advantages which are enjoyed by members of the other professions. Those of the camp, the senate, the bar, and the pulpit, may have to encounter difficulties, but they have the sympathy of numbers to sustain them. Their ministrations, their official duties are performed in the presence of large numbers of people. They have an excitement calculated and qualified to sustain them in the discharge of the duties to which they are called. Without these stimulants, the members of the medical profession have to encounter fatigue and danger, and oftentimes what is worse to bear, ingratitude for the most earnest and most successful labors it is possible to perform. (Cheers.) The soldier, it is true,

goes out to battle and exposes his life, but the excitement of the struggle, the hand to hand contest, sustains him, and well he knows that if successful the Victoria Cross will decorate his breast. The medical man exposes himself to dangers equally great, to pestilence more deadly than the most murderous fire to which the soldier can be exposed; and, unsustained by the excitement which attends the soldier, he steadily, manfully, nobly discharges his duties in the most effective manner to his fellow man, knowing that no distinction awaits his success, knowing, too, as I have said before, that perhaps he may be very poorly compensated or his services very poorly appreciated. (Loud Cheers.) But, though we have not the advantage of those who engage in commerce, who, though they may have to undergo toil and anxiety, yet reap the rich reward of wealth, yet we have the proud consciousness to sustain us of discharging the highest and holiest duties that man can ever be called to discharge.—that of promoting the happiness and comfort of his fellow men. (Cheers.)

One of the most important subjects that will engage the attention of this Convention is Medical Education. To the position to which I have drawn your attention, a position of influence so great, of importance so deep, there attaches a very grave and serious responsibility. It becomes necessary, therefore, that we should, by combination and co-operation with each other, adopt such a course as will give to those who are entering upon our profession, the high qualifications and high attainments so necessary to the proper discharge of duties of so important and noble a character. The subject of Medical Education, therefore, is a subject which will engage the serious attention of the Convention. Every member has the deepest interest in knowing that the qualifications of those who are to come after him shall be of the very highest character that it is possible to attain. In proportion as medical men are qualified for the performance of their duties will they deserve and receive the confidence of the public. The subject of a proper system of registration of medical men is of less importance to the members of the medical profession than to the community at large. We owe it to our fellowmen to provide some means whereby the great mass of the people may rightly distinguish between those qualified for the duties of the profession and those unqualified. If such means be not devised, injurious consequences affecting the health and happiness of the people would result. Then, again, the question of medical ethics, the question of the relation of professional men to each other, and to those who entrust themselves to their professional care, is also a subject which will be brought under the notice of this Convention. I do not think that any elaborate code of medical ethics is required. I believe a profession such as ours, so learned, liberal

and exalted, and exposed as we are to difficulties inseparable from the practice of a profession like our own, which has no public tribunal to which appeal can be made—the only true code of ethics is attention to the golden rule, "Do unto others as we wish to be done by." (Loud cheers.) The professional man who stands by that golden rule will exhibit in all his dealings, both with his professional brethren and the community at large, the character of the true gentleman, and will require little else, I believe, for his guidance. Before I sit down, I will make a few observations in relation to the great importance of unanimity in our proceedings. There is an old saying—I wish I could say it was an old slander—that "doctors differ." While we know that it is impossible for men to see eye to eye in every matter, and to hold precisely the same views, yet I do feel that, in view of the high position of this Association, and the important objects we seek to attain, it is one of its first duties to give a gentlemanly and generous consideration to each other's opinions, whether we differ from them or not. The only way to make this organization a success is by conceding, as much as possible, to those differences of opinion which must necessarily exist in the discussion of those matters to which we are called to give attention. I wish to say that the eyes of this Dominion are upon us. Our meetings will result in good or evil, just according to the spirit that we enter upon the discussion of those difficult questions, and the amount of accord and agreement that may prevail amongst us. I will not detain you longer. I feel most deeply your kindness in elevating me to the high position of your President, and I wish to say, before retiring from this chair, that I retire to the rank of a private member with a disposition to return your kindness and consideration, by doing in that private capacity, or in whatever position I may occupy, all in my power to advance the objects of this Association and the profession, which I regard as more important than any other secular calling. I beg to thank you most kindly for the great honour conferred upon me, and will take more pleasure in sustaining some other person in the chair than I have had in occupying it.

The honourable gentleman concluded his address amid loud cheers.

The Treasurer's Report was read, showing a balance in hand, and was referred to a committee of auditors, consisting of Dr. Rottot, of Montreal, Dr. J. H. Richardson, of Toronto, and Dr. Steves, of St. John, New Brunswick.

Dr. CANNIFF, of Belleville, read the report of the committee on the Plan of Organization. On motion of Dr. Smallwood, it was decided to have this report printed in French and English, and distributed for the use of members before action be taken on it.

Dr. MARSDEN, of Quebec, Chairman of the Committee on Medical Ethics, presented its report, recommending the adoption of a code of ethics substantially the same as that adopted by the American Medical Association, which was published as a supplement to the September number of the *Canada Medical Journal*.

A brief discussion ensued.

Dr. FENWICK argued that medical men should refuse to give information to Life Insurance Companies respecting the health of their patients, unless that information be considered strictly confidential.

At the suggestion of the President, the debate was adjourned till the second day, to enable members to look over the report.

On motion of Dr. BEAUBIEN, the Convention then adjourned till three p.m.

AFTERNOON SESSION.

The Association re-assembled at three o'clock, when Dr. MARSDEN, of Quebec, read the following report from the Committee on the Registration of Medical Practitioners, which was laid on the table for further consideration.

"The Committee appointed in October last, at Quebec, to consider the best means of securing the proper Registration of licensed practitioners throughout the Dominion of Canada, beg leave to report, that after mature deliberation they recommend that this Association take the necessary steps to have carried through the Dominion Legislature an Act similar (in so far as it is adapted to this country) to the Medical Act of Great Britain, passed in 1858, and that a committee be appointed to carry this report into execution.

That the members of the Association may have some idea of the Act which the Committee recommend, they beg leave to name a few of its leading features, viz.:

A council called "the General Council of Medical Education" is established. This Council consists of one person chosen from and by each of the various licensing bodies and the English Universities. The five Scotch Universities choose two members between them. Six members are also named by Her Majesty. A registrar and branch registrars are appointed. Provision is made to register all licensed practitioners up to a certain date for a nominal sum. Qualifications obtained after the passing of the Act pay a higher fee registration. Council has the right to demand of any body their course of study and character of their examinations, and any member of the Council may attend the examinations.

None but registered practitioners to be able to recover charges in a Court of Law.

A severe penalty is named for any one falsely pretending to be registered.

All of which is respectfully submitted.

WILLIAM MARSDEN, M.D., *Chairman.*
FRANCIS W. CAMPBELL, M.D.
W. CANNIFF, M.D.
HECTOR PELTIER, M.D.

Dr. R. PALMER HOWARD, on behalf of the Committee on Preliminary Education, made the following report :

" The Committee on Preliminary Examinations beg to submit the following recommendations :

1. That all persons intending to study medicine in the Dominion of Canada be required to pass a matriculation examination in preliminary education, and that their professional education shall be held to commence from the time of their having passed matriculation examination.

2. That the Matriculation examination for students of medicine in the Dominion of Canada shall be (with some alterations to be presently mentioned) that recommended by the Council of Medical Education and Registration of Great Britain, and adopted in the amended Medical Act of Upper Canada, and shall be as follows :

" Compulsory English or French language, including grammar and composition ; Arithmetic, including vulgar and decimal fractions ; Algebra, including simple equations ; Geometry, first two books of Euclid ; Latin, translation and grammar ; Natural History and Logic, and one of the following optional subjects ; Greek, French or English (according to nationality of students), German—and the Committee are of opinion that Mental and Moral Philosophy should be made compulsory at as early a period as possible.

3. That although an acquaintance with Greek is very desirable, yet, as the British Medical Council have (at their meeting in July last, 1868,) deemed it advisable to defer at present enforcing a knowledge of Greek on all medical students in Great Britain, this Committee, while recommending this language to all students, doubt the propriety of at present fixing the period at which a knowledge of it shall be compulsory.

4. That with the view of rendering the Matriculation examination efficient and uniform, it be conducted by persons engaged in general teaching, and officially connected with the Universities, Colleges, or Seminaries of the Dominion.

5. That the certificate of having passed the Matriculation Examination shall testify that the student has been examined in (1) English or French language, including grammar and composition; (2) Arithmetic, including vulgar and decimal fractions; (3) Algebra, including simple equations; (4) Geometry, first two books of Euclid; (5) Latin, including translation and grammar; Natural Philosophy and Logic; and in one of the following optional subjects; Greek, French, or English, (according to nationality of student), German.

6. That a degree in Arts of any British or Canadian University, or of any other University of good standing, be accepted as a sufficient qualification to enter upon the study of medicine.

7. That all the students presenting themselves for this examination shall pay the sum of——dollars prior to examination, and, in the event of failure, half the sum shall be returned.

All of which is respectfully submitted.

R. P. Howard, M.D., *Chairman.*
J. P. Rottot, M.D.

This report was also laid on the table for further consideration.

Dr. William Bayard, of St. John, New Brunswick, as Chairman of the Committee on Medical Education, presented the following report of the said Committee.

"As the curriculum of professional study required before obtaining a license to practice is now, since the action of the Medical Council of Upper Canada in 1866, almost the same in Upper and Lower Canada, your Committee have not many new suggestions to make, but rather to reproduce, with such alterations and additions as have appeared to them advisable, the regulations at present existing in the Provinces of Ontario and Quebec, with the view to their adoption by the sister Provinces of Nova Scotia and New Brunswick.

1. The Committee recommend that professional education shall extend, as now, over four years from passing of a matriculation examination, not less than three of which should be passed at an incorporated university, college, or school of medicine approved of; but your Committee strongly recommend that the above period of four years be so pased.

2. That besides the six months' winter session there shall be in each year a summer session of three months, so that nine months in every year shall be spent in the continuous acquisition of professional knowledge and training.

3. That the following branches of Medicine shall constitute the minimum curriculum of Professional Education, which all medical students

must furnish proof of having pursued, before presenting themselves for a license to practice Medicine, Surgery and Midwifery:

Descriptive Anatomy; Practical Anatomy or Dissections; Chemistry; Materia Medica; Institutes of Medicine (consisting of Physiology and General Pathology); Theory and Practice of Medicine; Principles and Practice of Surgery, Midwifery, and Diseases of Women and Children; of each of which two courses of six months shall be required; Clinical Medicine and Clinical Surgery, of each of which two courses of three months shall be required; Botany; Medical Jurisprudence and Practical Chemistry; of each of which one course of three months shall be required.

4. Provided, however, that two three months' courses of Practical Chemistry may be accepted in lieu of one six months' course of Theoretical Chemistry; and one three months' course of Practical Physiology, with a three months' course of Pathological Anatomy, may be accepted in the place of one six months' course of Institutes; and a three months course of Public Hygiene may be accepted in place of the course of Medical Jurisprudence.

5. Every student shall furnish proof of having studied Practical Pharmacy for a period of three months.

6. All students must give proof by ticket that they have attended during twelve months the practice of a General Hospital whose daily average of in-door patients is not less than 50, and that they have attended the practice of a Lying-in Hospital for six months.

7. That all graduates of recognized Universities and Colleges of the United States, who shall have passed before commencing their medical studies and matriculation examination equivalent to that recommended by this Association, unless they are graduates of Arts, shall attend one full course of lectures at some University or incorporated medical school in the Dominion of Canada, and complete four years of medical study, provided they have completed the curriculum recommended by this Association.

8. That there shall be two examinations—primary and final. The primary shall comprehend the branches of Anatomy, Materia Medica, Chemistry, Institutes of Medicine, and Botany; and the final shall comprehend the branches of theory and practice of Medicine, Surgery, Midwifery, Medical Jurisprudence, Clinical Medicine, and Clinical Surgery, and that the primary examination shall be passed at the end of the second and third years.

9. That the age of 21 years shall be the earliest age at which any medical degree or diploma shall be granted.

10. That the professional examinations shall be conducted in writing and orally.

C. BAYARD, M.D., *Chairman.*

The report was laid on the table for future consideration.

Dr. HINGSTON of Montreal read the following report on

STATISTICS AND HYGIENE.

"The Committee on Statistics and Hygiene have to report that, as regards the former, this country is now an almost unexplored field, and as regards the latter, no distinct and definite views are held, except in the practical applications of them by physicians and others engaged in the art of preserving health, and of warding off disease. For these reasons the Committee require to make observations that might otherwise appear too elementary, and will reverse the order in which they occur above.

For purposes of practical utility, Hygiene has been divided into general and special, or into public and private—relating to those laws which regulate the life of the individual; the application of those laws to the sanitary wants of a community, or to each individual composing that community. A subject of such vast moment has not received at the hands of medical writers the attention its importance demands. Ever and anon a disease sweeps with fatal strides over a portion of the earth's surface, when measures are adopted to stay its dreaded course, or to be relieved of its presence. But doubts have arisen whether measures ill-considered and hastily adopted, have not done much to aggravate the evils they were intended to alleviate. Of the necessity for some general laws on the subject there can be no doubt. Moses, the Law-giver, inculcated the care with which diseases, occurring by infection and otherwise, are to be prevented. Those laws were imposed upon the people, and were enforced with vigour. Although some portions of them were evidently intended for the land in which the Israelites then lived, and the circumstances in which they were then placed, yet, after a lapse of so many ages, we cannot but admire the sanitary code which drew the distinction between clean and unclean beasts—which forbade the eating of blood—which was intended to prevent the spread of skin and infectious diseases generally—which prevented the accumulation of human excretions and emanations, and which prevented man when sick, or when dead, becoming a source of disease and death to his fellowman. Beyond Holy Writ, and less perfect than Holy Writ, we first meet with Hygienic rules in the writings of Hippocrates, in his Essays on "Airs, Waters, and Places." We need not here allude to the ancient Latin authors who here and there inculcate hygienic precepts. Until within the memory of living man, public health, as a distinct branch of medical science, was unknown. Here and there, throughout Europe, we

find disjointed attempts, by municipal and other corporate bodies, to preserve the health of those they govern. But the first successful effort was made in France to make the health of the people the first care of the *Government*. At the beginning of this century, under the first Napoleon, a Council of Health was formed, to superintend the sanitary operations in the capital, and, half a century later, the whole of France was placed under the surveillance of Central and Departmental Councils. In Great Britain matters moved slowly, and it was not until Doctor Southwood Smith urged the importance of sanitary laws, that the Government became fully alive to their necessity. The Nuisances Removal Act, followed by the Baths and Wash-houses Act, the Town's Improvement Clauses Act, and the Public Health Act of just twenty years ago. The latter Act was productive of vast good, and the death rate of eight towns in England decreased from 30-5 per 1000 to 24-6 per 1000, a decrease in round figures of 6 per 1000.

The Common Lodging House Act, the Labouring Classes Lodging House Act, the Interment Act, and a Vaccination Extension Act and others have been passed, but a concise, yet comprehensive law for all sanitary purposes, has yet to be introduced to the Legislature of Great Britain.

In the United States of America progress has been but partial. In 1866 the State of New York resolved itself into a Sanitary district, composed of the Counties of New York, Kings, West Chester, and Richmond. The time for action was not too soon, for the mortality in some districts was terrible. But the result of the labours of the Sanitary Commission, in the city of New York alone, in one year, was remarkable. 3152 lives less were lost in the city than in the year preceding, notwithstanding the increased population. Yet it was a season of incessant rains and excessive humidity throughout a wide extent of country, the larger towns suffering an unusual amount of sickness.

If such was the state of matters in Great Britain and the United States, it is scarcely necessary to add that, in Canada it is still worse. Legislation has been confined to a single Act, passed in a period of alarm, and only intended to deal with epidemics as they occur. Yet is there no branch of science more important than that which relates to man's physical and moral condition; which deals with the external physical and chemical agents on which man's health or life depends; and particularly in Canada, where persons are exposed to a new set of influences, which may shorten or prolong life, benefit or injure health, cure or cause diseases, in proportion to the manner in which they are understood.

In Canada—one of the healthiest climates in the world—the mortality

in some of the cities is very great, and the necessity for action is urgent. Here and there in Canada, certain municipalities have taken steps to remedy existing evils, and in Nova Scotia and New Brunswick the Governments have done something; but their efforts are too partial in action and too limited in their sphere to be productive of any important advantages. A necessity exists for the introduction by the General Government—or simultaneously by the Local Governments—of a comprehensive system of sanitary laws, not so complete, perhaps, as those of the Mosaic code, nor so severe in the punishment of any violation of them. The details of such a Bill, or Bills, will, with the permission of this Association, engage the attention of this Committee.

The Report on Vital Statistics will be submitted at a later period of the session."

W. H. HINGSTON, M.D., *Chairman.*
W. BAYARD, M.D.
WM. CANNIFF, M.D.
G. E. FENWICK, M.D.
J. THORBURN, M.D.

This report was also laid upon the table.

The Committee of Auditors reported the accounts of the Treasurer correct.

The following Committee was appointed to nominate officers for the Association: For Quebec—Drs. Worthington, Marsden, Beaubien, Fraser, Rousseau. For Ontario—Dr. Berryman, Victoria College; Dr. Thorburn, Toronto School of Medicine; Dr. Henry, Ottawa; Dr. Sullivan, Kingston; Dr. Martyn, Kincardine. For Nova Scotia—Drs. Black, Wickwire, and Moren. For New Brunswick—Drs. Botsford, Hamilton, and Steeves.

The Committee then withdrew and commenced its labours.

The PRESIDENT said that the medical profession and citizens of Halifax would deem it a favour if the Association would accept of that city as the place for the next annual meeting. He could assure the Association that they would meet with a most hearty welcome.

Dr. R. S. BLACK moved, seconded by Dr. MOREN, that Halifax be the place of next meeting.

Dr. HODDER moved, seconded by Dr. BERRYMAN, that Toronto be the place.

Dr. HINGSTON moved, seconded by Dr. BROUSE, that Ottawa be selected.

After some discussion, it was decided to hold the next annual meeting at Toronto.

On motion of Dr. HODDER, it was decided that the time for the next annual meeting be the second Wednesday in September.

The Convention then adjourned till ten o'clock Thursday morning, the 3rd September.

### ENTERTAINMENTS—THE CONVERSAZIONE.

In the evening, the Medical Profession of Montreal entertained the members of the Association and their friends, including the *élite* of the city, at a brilliant conversazione in the William Molson Hall of the University of McGill College, which had been kindly placed at their disposal by the Governors of the University. It was beautifully decorated with illuminated scroll mottoes, also scrolls containing the names of eminent medical men deceased, all of which had been executed by a corps of amateurs, under the direction of the well-known University man—Mr. David McCord.

Fully a thousand invitations had been issued, and the halls were, as a consequence, crowded. Both within and without the buildings, every attraction that means or taste could supply were provided for the enjoyment of guests. Hundreds of many coloured lamps lined the approaches from Sherbrooke street, and sparkled among the little forest of trees that stretches past the front of the College, while an electric light blazed from above the centre doorway, and fairly illuminated McGill Avenue throughout its entire length. This latter was under the charge of Dr. Baker Edwards, who had certainly every reason to be satisfied with the striking success of his experiment. Dr. Edwards afterwards interested a large auditory in Dr. Dawson's lecture-room, by a series of experiments with the Giessler Tubes, showing the electric light in air, vacuo, and nitrogen gas. The museum and library also served, in no small degree, to furnish means of amusement, while the large hall upstairs gave opportunity for promenading or pleasant chit-chat. In the centre building, M. Gilbert, the celebrated *chef de cuisine*, offered the attractions of two large supper-rooms, and certainly found no want of patrons.

### SECOND DAY.—*3rd September.*

Dr. TUPPER took the chair shortly after ten o'clock. The minutes of the previous day's proceedings were read and approved.

Dr. W. CANNIFF of Belleville, read letters from Dr. Graften Tyler, of Georgetown, D.C., and Dr. Atlee, of Harrisburg, Pennsylvania, expressing their pleasure at the formation of a Canadian Medical Association, and their regret at being unable to attend the Convention, owing to circumstances over which they had no control.

The Convention then proceeded to the consideration of the report on Statistics and Hygiene.

Dr. REDDY, of Montreal, moved, seconded by Dr. EDMONDSON, of Brockville, that the report be adopted.

Dr. LAROCQUE (in French) urged the importance of having Hygiene regularly taught in the medical schools.

The PRESIDENT called attention to the chief point in the report—that of recommending that a bill on sanitary matters be passed by the Legislature. The question was, whether the Association should accept this recommendation and authorize the Committee to prepare a Bill.

The report was finally adopted.

Dr. G. W. CAMPBELL, on behalf of the "Committee on the best means of having a uniform system of granting licenses," read the following report:

"As the reports of the Committees upon Preliminary and Professional Education embody the suggestions for the regulation of the qualifications of candidates for license in the Dominion of Canada, comparatively little remains for this Committee to report.

Your Committee beg leave respectfully to recommend:

1. That every candidate for license shall furnish proof: 1. That he has attained the age of twenty-one years. 2. That he has passed the Matriculation examination, and has completed the curriculum of professional study recommended by your Committee upon these subjects; 3. That he has pursued his studies for a period of not less than four years from the date of passing his Matriculation examination.

2. That no person shall hereafter receive a license to practice medicine, or be permitted to register a degree or diploma within the Dominion of Canada, unless such degree, diploma, or license has been obtained from some University, College, or incorporated School of Medicine in Her Majesty's Dominions, whose requirements for graduation or licensing are equal to the minimum curriculum recommended by your Committee on Medical Education.

3. That the professional examinations recognized shall be conducted in writing and orally, and that Clinical examinations shall be conducted at the bed-side in a practical manner.

4. That this Committee would recommend that there should be formed a general Medical Council of Education and Registration for the Dominion of Canada, who should have the supervision of Medical Education, and should be empowered to appoint visitors to the different Universities, Colleges, and Licensing Bodies in the Dominion, to ascertain that the minimum curriculum is duly enforced, and the examination fairly conducted.

5. That a degree, diploma, or license from recognized bodies should only be received for what it sets forth, and that the holder should be subjected, before receiving license, to an examination in the branches of Medicine not specified in the document.

6. Your Committee, in conclusion, recommends that persons entitled to registration in Great Britain should have the same privilege granted to them in the Dominion of Canada.

G. W. CAMPBELL, M.D., Chairman.

On motion, the report was received and laid on the table for future consideration.

On motion, it was decided that each speaker be restricted to five minutes, and that no one but the mover be allowed to speak twice on the same subject.

The SECRETARY then read a letter from Mr. Edward Barnard, drawing the attention of the Association to the medicinal properties of the Varennes Mineral Springs, and requesting that a Committee be named to investigate their merits.

Several members expressed their views—stating that if the Association acceded to the request of Mr. Barnard—at the next meeting they would be inundated with similar requests from the proprietor of every mineral spring in the country, of which there were some three hundred. The Association unanimously decided that it was not in their province to deal with such questions.

The Association then adjourned till 2 o'clock.

AFTERNOON SESSION.

At 2 o'clock the Association met and proceeded to the consideration of the constitution and by-laws. This led to a good deal of desultory debate, and at five o'clock the Association had only reached the end of the constitution—which, as amended, was, on motion of Dr. Brouse, of Prescott, seconded by Dr. G. W. Campbell, adopted.

As a number of the members from Ontario were anxious to leave for home by the evening train, it was decided to proceed with the election of officers, deferring the consideration of the by-laws till the following day.

The Nominating Committee presented their report, recommending the following list of officers for the ensuing year:

*For President*—Hon. Charles Tupper, M.D., C.B.

The mention of the honourable gentleman's name was greeted with loud applause, the members standing and giving three hearty cheers.

Dr. PELTIER, one of the Vice-Presidents, then declared Dr. Tupper re-elected President by acclamation.

Hon. Dr. TUPPER, in rising to respond, was again greeted with repeated cheers. He said:

*Gentlemen*,—If I felt gratified at the great honour which you did me a year ago, I certainly feel doubly so now. I cannot but regret that this Association have not considered it wise to select some one of the distinguished and eminent men in the profession, of whom, I am proud to know, you have a great many who have a reputation, not only within this Dominion, but in the adjoining Republic, and, I may say, in Europe. I feel it is a source of regret that you have not considered it judicious to select some one of the distinguished members of the profession that you have amongst you, to hold the position in which you have placed me. But I feel the more sensibly the great honour you have conferred, because I know a great many gentlemen around me who are infinitely better entitled to the great distinction which you have conferred on me. I may say, as I said on a former occasion, although I am quite prepared to give place to a great many members of this Association as regards the high position they occupy in the profession, yet I will yield to no man in this body in the desire to advance the interests of the profession, and carry out the objects of the Association. (Cheers.) Whatever position I may occupy, I can assure you you can at all times command the very best services in my power to give expression to the views and sentiments which, after mature consideration, this Association believes will promote the benefit of our profession and the interests of the country at large. (Applause.) I have attended this meeting of the Association at no small inconvenience. When I tell you that out of the last six months I have only had the pleasure of spending something like one month with my own family, you can readily imagine my unwillingness to leave my home again so soon. But I felt my duty to you was imperative; and I could not satisfy my own feelings unless I came and took part in the deliberations of this Convention. The results of the formation of this Association will, I believe, amply repay every member for the great expense, loss of time, trouble and inconvenience, he has been put to in attending these meetings. When the Government of this great Dominion was formed, a year ago, the portfolio of a Cabinet-Minister was tendered to me, but I felt I could serve the country quite as effectively by declining to take that position; and I did decline. When, subsequently, the highest subordinate offices in this Dominion have been offered for my acceptance, I have steadily and uniformly declined them; because I believed that in an independent position I could be of greater service to my country than by holding any office whatever. (Cheers.) But I can assure you that, whatever claims I may have upon the State—devoted, as I am, to the honourable profes-

sion to which I belong—the highest reward my ambition demands from my country, is to relieve me from public and official duties, and allow me to devote my life more exclusively than hitherto to the profession in which the happiest hours of my life have been spent. (Cheers.) My greatest anxiety is to be able to devote myself more entirely than my public duties, for the last dozen years, have enabled me to do, to the duties of the profession which has been my delight, and to which I have devoted my eldest son. I beg again to thank you most cordially for the great honour you have done me, and I again assure you that nothing shall be wanting on my part to evince my lasting gratitude.

Dr. A. G. BELLEAU was then nominated the General Secretary, and was re-elected by acclamation, which declaration was greeted with loud applause. Dr. H. Blanchet,of Quebec,was unanimously elected Treasurer.

For Vice-President for the Province of Quebec, Dr. G. W. Campbell was the nominee of the Committee.

Dr. TESSIER nominated Dr. Marsden, seconded by Dr. Dagenais, and spoke in high tones of that gentleman's ability and efficiency, and the great services he had done to the Association—styling him the Father of the Association. (Cheers.)

The vote was then taken, when Dr. Campbell was declared elected by a large majority. His election was greeted with three cheers.

Dr. Campbell briefly expressed his thanks for the honor conferred on him, and said he would at all times endeavour to avoid doing anything which would in any way hurt the feelings of any member of the Association.

The other officers were elected by acclamation, as follows:

Vice-President for Ontario, E. M. Hodder, M.D., (re-elected); for New Brunswick, Le Baron Botsford. M.D., (re-elected); for Nova Scotia, Hon. D. McNeil Parker, M.D.

*Local Secretaries.*—Quebec, Dr. Rottot; Ontario, Dr. W. Canniff, (re-elected); New Brunswick, Dr. W. S. Harding; Nova Scotia, Dr. A. Moren.

Dr. HODDER, of Toronto, said he could not adequately express the gratitude he felt for the compliment they had paid him in electing him a second time as their Vice-President. He felt confident that if the Association was only carried out in the spirit with which it had been brought into existence, it would do more towards elevating the medical profession throughout the length and breadth of the Dominion than anything else could do. It would elevate the standard of education, prevent empirics from practising all sorts of deceit and fraud, and cause a better feeling to exist amongst all members of the profession throughout the

Dominion. He should have been delighted to see more gentlemen present from Nova Scotia and New Brunswick—two Provinces of the Dominion of which he knew, comparatively speaking, very little. He trusted that next year he would see some of them at their annual meeting, and that by alternate visits they might ultimately become as one family, united in everything that is calculated to benefit the profession and promote the public welfare. (Cheers.)

The Convention then adjourned till 11 a.m., Friday, September 5.

### THE BREAKFAST.

On Friday morning, September 5, the Association, with a number of our leading citizens, were entertained by the Medical Profession of Montreal to a public breakfast in the St. Lawrence Hall. Everything was got up in the style for which Mr. Hogan is so celebrated. The chair was taken shortly after nine o'clock by Dr. G. W. Campbell, Chairman of the Committee of Arrangements and Vice-President of the Association for the Province of Quebec. He was supported on his right by the Hon. Dr. Tupper, C.B., and on his left by Dr. Hodder, Vice-President of the Association for Ontario; also by His Worship the Mayor, Wm. Workman, Esq., Hon. Gideon Ouimet, Attorney-General for the Province of Quebec; Hon. Justices Mondelet, Loranger, and McKay; Hon. C. S. Rodier, Thomas Morland, Esq., Dr. Beaubien, Dr. Painchaud, and J. A. Chapleau, Esq., M.P.P.; Dr. Fraser and Dr. Peltier acted as Vice-Chairmen.

After justice was done to the good things, the usual loyal toasts were given from the chair.

The CHAIRMAN then gave "Our Guests, the profession from the various Provinces." He regretted that it had not fallen into better hands to propose this toast, for he felt he could not do justice to it. He expressed great pleasure in meeting gentlemen of the faculty from Ontario, Quebec, and the sister Provinces of Nova Scotia and New Brunswick. Referring especially to Nova Scotia, he said if it was left to the doctors to settle among themselves, there would be no further question of Repeal in Nova Scotia, for they, the medical fraternity of this part of the great Dominion, would not let them go home again until they had agreed right heartily to the Confederation. The men of Nova Scotia were too valuable, too good, to lose from among the classes embraced in the Union, and, as he had said before, they could neither afford to lose them, nor would they do so if the issue rested with the doctors. He hoped that the patience of gentlemen from distant places had not been exhausted, and that the delay they had already expe-

aienced in getting away would not inconvenience them. The medical profession of Montreal had given them all a right warm and hearty welcome, and he only hoped that the individual members who had attended had found as much pleasure and advantage in attending as he had himself done. (Cheers.)

The toast was drunk with "all honours."

The Hon. Dr. TUPPER, C.B., (whose rising was the signal for immense applause), responded. He said he did not intend to detain them longer, as he knew they were waiting, and the hour to which they had adjourned the meeting of the Convention that day was near at hand. He referred at some length to the enterprise and good feeling displayed by the members of the profession in Montreal, in inviting the whole profession of the great Dominion to this city for the purpose of the Convention, and in entertaining them in the right hospitable manner in which they had been entertained. Having been again elected President of the Association, he supposed a few words would be expected from him on its behalf, and he acknowledged that obligation to his many able and distinguished friends around him, among whom, if any distinction could be made, he was, if anything, most particularly glad to number the gentlemen from the Maritime Provinces. After-dinner speaking was a thing he had never been much accustomed to; but after-breakfast speaking was a matter entirely novel and strange in the whole of his experience. But this he would say, that this hospitable and liberal reception of the general medical profession of the great and immense Dominion of Canada, by their brethren of Montreal, augured not only a wise generosity and enterprise on the part of the latter, but a right appreciation of the objects and scope of the society of which they were all equally members. Now, let his friends around him reflect for a moment on what had taken place. They had been received not only with every welcome and demonstration of kindness and friendship, but to fill the cup to running over, the Montrealers had given them that splendidly arranged Conversazione, and had brought to that delightful gathering not only all the medical talent of this great and important city, but the collective beauty of the place, to heighten the interest and attach a charm to the proceedings. It was all very well for old Benedicts like himself to admire at a distance, and then discreetly to retire. But those younger members of the profession, whose hearts were not steeled, and who were still martyrs to the mercies of bachelorhood—some of those young men, he would be bound, would be found to give their most hearty cohesion to Inter-Colonial Union. The chairman had referred to Nova Scotia. Now he was not going to give a political dissertation—nor

indeed would he touch upon politics at all, further than to say, in connection with this subject, that they could readily understand—those who had been gratified with a view of this magnificent and gigantic city during the past week—how the Nova Scotians, fresh arrived from their little place Halifax—little and unimportant compared to this wealthy and progressive city of Montreal—would feel, when they contemplated the signs of that wealth and progress; they must feel, as he felt that Halifax, and towns and cities of that class in the Provinces of this Dominion, must, in the march of events, be necessarily swallowed up, absorbed by this, the real and commercial centre of the vast body known as the Dominion of Canada. Looking back upon the past, looking hopefully forward into the future, he had no fear for the prospects of the Confederation. So much had he ventured to say on Confederation and Nova Scotia, and now he had done with that subject. Returning nearer home, and speaking of the Medical Association, the hon. gentleman descanted at some length upon the past history, present position and future prospects of the society. He looked upon it as containing all the elements, when united, to constitute a great and powerful institution for the public good; and, in illustration of his meaning, he instanced the city of Montreal, built up by the industry and perseverance of united French, English, Scotch and Irish—an edifice to wonder at, and of real significance from whatever point of view it was regarded. Dr. Tupper concluded by again thanking the assembly for the kind way in which they had received him, and sat down amidst tremendous cheering.

Drs. HODDER, BAYARD, MARSDEN and PAINCHAUD also responded.

The CHAIRMAN then proposed "The Mayor."

His WORSHIP responded heartily, welcoming the medical men from the various parts of the Dominion to Montreal.

"The Bench and the Bar" was next proposed, and responded to by Judges Mondelet and Loranger.

Dr. PELTIER proposed the "Canada Medical Association," which was responded to by Drs. Beaubien and Marsden.

Dr. FRASER proposed the "Retiring Officers," which was responded to by Dr. Hingston.

Several volunteer toats were given. Shortly after eleven o'clock the gathering broke up.

### THE ASSOCIATION—THIRD DAY.—*September* 4.

The Association resumed its business at half-past eleven to-day.

### THE BY-LAWS.

The Convention then proceeded to the consideration of the report of the Committee recommending a code of by-laws for the Association, and adopted them one by one, with some alterations.

Dr. SMALLWOOD moved, seconded by Dr. DAVID, that the by-laws, as amended, be adopted.—Carried.

Dr. TUPPER observed that it was impossible for the Convention to proceed with the consideration of the various reports received this session, and therefore it would be better to postpone them till the next annual meeting, with the exception, perhaps, of the Code of Ethics.

Dr. HINGSTON moved, seconded by Dr. ROTTOT, that the Code of Ethics, as proposed by the Committee, be adopted.—Carried.

Dr. MARSDEN moved that the following Committee of Arrangements for the next meeting of the Association be appointed :—Drs. Hodder, Richardson, Berryman, Thorburn, Hall, Canniff, and DeGrassi.—Carried.

Dr. LAROCQUE presented the second annual report of the Montreal Sanitary Association.—Referred to the Committee on Hygiene.

The following Committee on Printing was appointed :—Drs. David, Smallwood, Hingston, Marsden, F. W. Campbell and Robillard.

On motion, all the standing Committees of last year were re-appointed.

Dr. MARSDEN moved that the Committee re-consider the action taken the previous day on the communication respecting mineral waters, with a view to having that letter referred to a Committee.

Dr. HINGSTON thought it would be injudicious to re-consider the matter.

Dr. DAVID was of the same opinion. If they paid so much attention to these mineral springs, they would be besieged with communications from the proprietors of every spring in the country.

Dr. Marsden's motion was lost.

Dr. BAYARD moved, seconded by Dr. SCOTT, that the thanks of the Association be tendered to the Grand Trunk Railway, Canadian Navigation Company, Richelieu Company, Quebec and Gulf Ports Company, International Steamboat Company (plying between St. John, N. B., and Portland), and Great Western Railway.—Carried.

A vote of thanks was also tendered to the Natural History Society for their kindness in allowing the Association the use of their hall.

Drs. ROTTOT, SMALLWOOD, and FRASER were appointed as an Auditing Committee.

Dr. HINGSTON moved, seconded by Dr. BEAUBIEN, that the thanks of the Association be tendered to the Press of Canada, and the Montreal Press in particular, for the aid they had rendered to the Association. Carried.

The PRESIDENT received a letter from Dr. Edwards, asking, on behalf of the Chemist's Association, the privilege of making some observations on

Pharmaceutical Education, and of advocating a separate and official course of study for Pharmaceutical students.

The PRESIDENT referred that gentleman to the Committee on Chemistry and Materia Medica.

Dr. SCOTT moved seconded by Dr. GODFREY, that the President vacate the chair, and that it be taken by Dr. Beaubien.

Dr. SCOTT then moved, seconded by Dr. CRAIK, that a vote of thanks be tendered to the President, Dr. Tupper, for his very able conduct in the Chair, which has conduced so much to the interest and harmony of the Association, and the despatch of business. Carried with loud cheers.

Dr. TUPPER briefly responded. Votes of thanks were then tendered to the Vice-Presidents, the General Secretary, and the local Secretaries for the efficient performance of their duties during the past year.

The Association then adjourned, to meet at Toronto, the first Wednesday in September, 1869.

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# Canada Medical Journal.

MONTREAL, OCTOBER, 1868.

## THE CANADIAN MEDICAL ASSOCIATION.

We devote a large portion of our space this month to recording the proceedings of the first annual meeting of the Canadian Medical Association, which took place in Montreal on the 2nd, 3rd and 4th of September. The attendance, although large—fully one hundred medical men outside of the city being present—did not quite come up to anticipation. The greatest unanimity and good feeling prevailed, and we trust that a sure and certain foundation has been lain, upon which to build up our Canadian Medical Association. The various committees named in Quebec, last year, mustered in good numbers, all we believe having quorums. They began their labours the day previous to the meeting of the Association, and by the time it met several were ready with their reports, among them the Committee on By-Laws, also the Committee on Medical Ethics, and by the second day all had handed in their reports. Dr. Tupper, the President of the Association presided, and by his firmness, impartiality, and parliamentary experience, contributed not

a little to the despatch of business, and the success of the meeting. The Association shewed its wisdom in again electing him its president. In the Province of Quebec, Dr. Peltier, who filled the office of Vice-President for the past year, gracefully retired to allow of the election of an English speaking practitioner, and the choice fell upon Dr. George W. Campbell, the worthy Dean of the Medical Faculty of McGill College, whose election was greeted with loud applause. A better selection could not have been made. Pre-eminently the leading English speaking practitioner in this Province, well known and highly esteemed and respected, his claims to the highest honours in the power of the profession to bestow, were admitted on all sides. In New Brunswick, Dr. Botsford of St. John, and Ontario, Dr. Hodder, Toronto, the Vice Presidents of the previous year, were re-elected. In Nova Scotia, the choice of the nominating Committee for Vice President fell upon the Hon. Dr. McNeil Parker, of Halifax, and he was returned by acclamation. The various reports presented were laid upon the table, with the exception of those on a Code of Medical Ethics, which was adopted, and the report on the Constitution and By-laws, which was brought up for discussion. It was taken up clause by clause, and after numerous alterations and amendments was declared carried. The importance of the various reports presented, cannot be over estimated, and it is perhaps as well that the time of the Association was so completely occupied in discussing and arranging matters of detail, as to render it necessary to pospone their consideration until the second annual meeting, which takes place in Toronto on the first Wednesday in September, 1869. The members will then have had ample time to consider the various questions involved, and whatever remarks may follow will doubtless be the result of mature deliberation. No time will therefore be lost in useless discussion, a consideration of no small moment to a class of men whose time is so exceedingly valuable. We have to acknowledge our indebtedness to the Montreal *Daily News* for a large portion of our report, and we cannot help observing that the introductory speech of Dr. Tupper has been reported with wonderful exactness.

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## AITKINS' PRACTICE OF MEDICINE.

Owing to the large amount of our space occupied with the proceedings of the Canadian Medical Association, a Review of the first volume second American from the fifth London Edition of Aitkins' Practice of Medicine, which has just been issued by Lindsay & Blakiston, of Philadelphia, is unavoidably crowded out.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Abstract of the Introductory Lecture to the Medical Course of McGill University*, by Principal DAWSON, *Nov.* 2, 1868.

The lecturer commenced by stating, that on reading the opening address of Dr. Acland, as President of the British Medical Association, and the reports of introductory lectures delivered at the opening of the Medical Schools in London, his attention had been directed to the character of medicine as an art and a science, and to its relations to the modern scientific thought of our time. As to the question whether medicine is to be regarded as an art or a science, there might be different opinions, though the safer way was to regard it as partaking of the qualities of both; but there could be no doubt as to its relations to various sciences, and to modern scientific culture in general. He would refer to a few points bearing on this subject.

First, there could be no doubt as to the importance of scientific training to the medical student. He should as far as possible not merely store his mind with facts, but acquire by a wide range of scientific study, habits of severe and accurate thought, enabling him rigidly to investigate all supposed causes, and on the one hand to reject crude and baseless theories, and on the other hand to connect every fact with those related to it, and to grasp the laws of phenomena, and the hidden causes of complex effects. Such training is also essential to that clear and ready thought, so important to the medical practitioner. It is not without reason that higher preliminary training than formerly, is required of the medical student; and even when his attention is directed to languages as well as to science, it is that he may receive mental training, and that he may have access to a larger sphere of scientific culture.

Secondly, modern science has in many of its departments a direct bearing on medical practice. We are struck with wonder, for example, when we contemplate the vast growth of chemical science within the last ten or twelve years, and more especially when we think of the marvellous

revelations of organic chemistry as to processes which we were obliged at one time vaguely to attribute to vital force. We should indeed be disposed to regard the systems of animals as mere chemical laboratories, were it not that microscopical and physiological science had made equally rapid strides in the domain of life and organisation. Every fact, whether of health or disease, is now merely a link in long chains of chemical processes, and an element in groups of organic structures ranging from man to the humblest animalcule, and requiring a large extent of chemical, physical, physiological and zoological knowledge for its proper comprehension.

Again, modern science brings tribute to medicine in the vast array of apparatus and contrivances, mechanical, chemical, optical and electrical, made subservient to medical practice, and the student must be prepared to understand these appliances, and when called upon to act for himself, to judge as to their merits, without, on the one hand, being led away by an unthinking and ignorant enthusiasm in favour of every specious proposal or new contrivance, or, on the other hand, clinging to an equally ignorant conservatism and rejection of improvements.

Farther, medical art is related to the science of mind and to the laws of our common humanity. The low views of man that were once current can no longer be maintained; and the true physician who would rise to the ideal of his profession must not regard his patients as mere animal machines. In so doing he would reduce his profession to the level of farriery, and deprive it of the sympathy of humanity. He must regard the human body as the shrine of an immortal spirit, acted on by the condition of its complicated material organism and again reacting powerfully on this in all its various conditions of health or disease. Sound health is auxiliary to all that deserves the name of education, art, literature, science, morals or religion; and all these things react on health. Hence, it is in our day an important work of the medical profession to study and promote the great cause of sanitary science; and thus to strive to raise the struggling multitude from the slough of chronic unhealthiness into a condition in which there will be free scope for all that is noblest in humanity.

Nor will attention to these higher relations of medical art be without its immediate reward, for the public mind has now attained sufficient culture to detect and expose the failure of the professional man to appreciate his high vocation, and also to reward him who shows himself eminent in that which tends to prevent the evils which flesh is heir to, rather than to palliate or cure them when they have established themselves. Sanitary science will soon become a remunerative as well as an honourable part of medical acquirement. "It may," says Dr. Acland,

"be confidently expected, that one result will be the elevation of the duties of an Officer in State Medicine to that of a recognised profession, as in several special instances it has already become. At present it is not uncommon for a young man to be charged with wasting his powers if he devotes himself to improve the public health. Hereafter, charge of the public health must be made as much a matter of honourable ambition in the body politic, and must become as much an object of special education and training, as the business of any other recognised branch of the civil service. The Government will have to define the duties to be discharged by Public Health Officers or other Officers of Public Medicine, and the General Council of Medical Education will be able to direct the education of those who aspire to the performance of the duties so defined."

These are but a few of the points in which the medical student must keep himself abreast of the scientific tendencies of the age. If he fails to do so, an educated public opinion will detect his deficiencies and consign him to merited contempt. His own conscience will condemn him, as one who has failed to improve the opportunities presented to him, and who has presumed to enter into the great battle with disease and death without arming himself fitly for the contest. God, who is the author of all that our science investigates, and who regards all the works of his hands, will condemn him, as one who has failed in the highest of duties, that which he owes in love as well as professional skill to his brother man. The medical student should enter on his work with the firm resolve to improve to the utmost his own powers and the opportunities given him; looking in this for the approval of a good conscience and for the highest professional success. That it may be so with every medical student, is the wish and prayer of every good man; as it is of all the members of this Faculty, and of all connected with this University.

It is indeed essential to the character and standing of the University itself, that this high estimate of the connection of professional training with science should be maintained; for, apart from the tendency of College training to elevate the professions from the standing of mere empirical arts to be learned by an apprenticeship, to that of scientific studies, the connection of professional schools with the University would only lower the latter without elevating the former. On this the Regius Professor of Medicine at Oxford, in the close of his lecture above referred to, thus eloquently insists:

"Yet we may ask, why the Professions should be welcomed by the University? Why this union should be desired by them? The answer is plain. Not through the guidance of the people by a few superior minds, not through the laying down rules of fashion by concurrence, not

through the dogmas of authority by compulsion, but by the culture of practical life, by the moral elevation of the working people of every class, are the great traditions of this country to be maintained.

"Not by Peers, nor Commons, not by Employers, nor Artisans as such, nor by all combined,—but by love of knowledge, of truth, and of uprightness; by a wide view of the needs of man, religious, moral, material; by a small estimate of our own powers, but a large one of our duties; by a just sense of the narrow field to which our own vision is limited, and of the shortness of the time during which to each of us that vision shall last;—by all these qualities uniformly diffused according to the capacity each may have, are Peers, Commons, Employers, Artisans, to keep alive the force of their common country.

"And if these thoughts seem to belong to the arena of the political world, and not to the quiet recesses of a Scientific Assembly, remember that if your young men who are to be engaged in professional life, if the sons of your commercial men come hither, you will find their characters tempered through life by the processes to which they have been submitted. If they find here the traditions and the practice of general culture, of love of good, of pursuit of all knowledge, pure or applied; if they learn precision when precision is needed, method when method; if they are taught to indulge in imagination where only imagination avails, fancy where only fancy; if they see us here resisting authority when there should be enquiry, but bowing humbly before that which is not for man to know, not ashamed of reverence and hope, nor afraid of faith; if here they may learn to be industrious and contented, of manly yet of tender heart,—then the Professions may send their youth to a place the country has reason warmly to cherish, if not wholly to approve."

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*An Essay on the Contagion, Infection, Portability, and Communicability of the Asiatic Cholera in its relations to Quarantine; with a brief History of its Origin and Course in Canada, from* 1832. By W. MARSDEN, A.M., M.D., ex-President and Governor of the College of Physicians and Surgeons, Canada East; Honorary Fellow Medico-Botanical Society, London; Corresponding Fellow Medical Society, London; Honorary Fellow Montreal Pathological Society; Honorary Fellow Berkshire Medical Institute and Lyceum Natural History; Honorary Fellow Medico-Chirurgical Society, New York; Honorary Member of the American Medical Association, &c., &c., &c.

*(Continued from our last.)*

It is now upwards of twenty years since I first publicly advocated the opinions, through the columns of the British American Journal of Medi-

cal and Physical Science, and other periodicals, that have since been endorsed and advocated by the Cholera Conference, which met at Constantinople in May 1866, viz: "That Asiatic Cholera is an infectious disease, and is portable, communicable, and controllable, and may, like the plague, be transmitted and communicated both by persons and personal effects."

Entertaining these views I proposed a plan of quarantine, based on "the principle of absolute non-intercourse, for a short period, with persons from abroad, suspected of being infected with cholera, and a thorough disinfection of personal effects," in 1854.

It must be conceded, I apprehend that the soundness of the principles I have so long advocated, are now appreciated by the bulk of the medical profession everywhere, and that the opinion in regard to the efficacy of quarantine for the arrest of Asiatic Cholera is also everywhere gaining ground. The United States, and especially the State of New York, have set an example worthy of the imitation of other and older countries.

The report of the commissioners of quarantine, and the health officer of the port of New York for 1865, says: "Nearly all agree that cholera is contagious, and can be quarantined at a port of entry, providing the proper precaution as to non-intercourse, isolation, disinfection, cleansing, &c., be carried out. The following principles are laid down by Dr. Marsden, as containing the gist of cholera and its general laws, and so thoroughly coincides with my views that I insert them entire:

1st. That it is a communicable and controllable disease.

2nd. That its causes are not in the atmosphere.

3rd. That it accompanies human travel and human traffic.

4th. That it progresses at the rate of vessels across the ocean, and never precedes them.

5th. That it is transmissible by clothing and effects as well as by passengers.

6th. That it never appears in a new locality without communication, directly or indirectly, with infected persons or places.

7th. Lastly, that it may be arrested, like the plague, by an absolute quarantine of a short duration.

The importance of adopting a uniform system of quarantine (to be firmly administered at each point,) cannot be too strongly urged, for if such system does not exist, very many vessels infected with disease, which may find at one port a complete and stringent quarantine system, known to be carefully enforced, may change their destination, run into some other port, where laxity in quarantine prevails, and thus be permitted to spread contagion throughout the land."

These principles are further established in a report, made by M.

Alexander Moreau de Jonnés, to the superior Council of Health of Paris, on the pestilential cholera morbus, as long ago as 1831. After giving a large amount of evidence showing that the disease is in no way attributable to an epidemic cause resident in the atmosphere, he sums up as follows:

"1st. That the pestilential cholera proceeds from a germ, a principle *sui generis*.

"2nd. That it is transmitted exclusively by communication with individuals who are infected by this germ, and by the use of things which conceal it.

"3rd. That it appears only in places where these communications are in operation.

"4th. That it is imported from one place to another by vessels-of-war, ships of commerce, caravans, waggon-trains, armies, bands of pilgrims, fugitives, and single or isolated individuals.

"5th. That it spreads itself on board ships by the communication of their crews with individuals or things which are infected with it, and that it is introduced by them into the ports where they touch on the way, or into the ports of their destination.

"6th. That it spreads from the points on the coast infected in this manner, across the interior of the largest countries, following men in all their communications and propagating itself with a rapidity proportionate to the activity of the social relations.

"7th. That it penetrates invariably into a country by the part of its frontiers which is in communication with other countries already infected; and that it introduces itself into a city through the quarters of which the inhabitants are in communication with places which it has already ravaged.

"8th. That, in order to preserve a port or a city on the frontier, it is sufficient to watch or to interdict the arrival of ships or travellers coming from countries where it prevails.

"9th. That, in order to guarantee a mass of individuals inhabiting a city where it has been introduced, it is sufficient to separate them from the rest of the population, and to prevent their having any communication.

"10th. That the atmospheric air is to such a degree powerless to propagate it at a distance that a family, a party of persons, can live with security in the midst of its ravages in the city, or the country, where it causes the most terrible mortality, provided they be strictly sequestered before having been exposed to its action, and until the moment that it has entirely ceased.

"Whence it follows, that the Asiatic Cholera is transmitted and propagated like the plague, by mediate and immediate communications with individuals who are infected with it, which constitutes the true and essential character of contagious diseases, and makes them differ entirely from epidemic diseases, the causes of which reside in the atmosphere."

Again:—Henry E. Bartlett, the health officer of the port of New York in 1854, at the time of the visitation of Asiatic Cholera, says: "I have thought that a statement of the facts in relation to its appearance at the quarantine at that time, might be of some aid in enabling you to take efficient measures to secure the desired object. Being facts, they point very significantly to the only plan to be adopted to prevent the introduction of this deadly malady from our ship board. You will recollect that 1854 was the year of great immigration, the number of vessels arriving in the month of May alone being four hundred and twenty-four.

The first cases of cholera were found on the "North American," which arrived on the 15th of May, having left Liverpool, where the cholera then prevailed, on the 14th of April. There had been no sickness until the vessel had been more than two weeks at sea. While crossing the Banks, cholera made its appearance. The ship was detained, and the passengers all landed their baggage and clothing, thoroughly cleansed and disinfected, and none were allowed to leave until no new cases had appeared for two days. They were detained about a week.

On the 17th the "Progress" arrived, having left Liverpool with seven hundred emigrants. Thirty-nine died on the passage, and eighty cases were taken from the vessel, and new cases were hourly occurring. The well passengers from the vessel, as well as from the "Empire," were placed in the grounds around what was then called the Hill Hospital, and the sick with that disease placed in that building, being about twelve or fifteen rods south of the shanty buildings in which were placed the cases of typhoid fever, most of whom were at the time convalescent.

About the same time the ships "Charles Hill," the "Plymouth," the "Robert Parker," the "G. J. Patten," and some others, arrived from Havre, all having a large number of cases of small-pox, of a very malignant type. These were all placed in the small-pox hospital, situated in the North-Western angle of the quarantine grounds, at least eighty rods from the hospital and grounds where the sick and well from the cholera ships were placed. The passengers and their effects from these vessels were subjected to a very thorough process of cleansing and disinfecting, and allowed to leave for the city. No cases of cholera were subsequently traced to them; but the convalescent patients in the shanty-buildings, who were recovering from typhoid fever, began to die of cholera, and in

less than one week, *seventy-five per cent of the patients in the small pox hospital died of cholera.*

On the 21st of May the "Dirigo" arrived from, I think, Glasgow, with a small number of emigrants. On her passage she took from the wreck of a vessel from Liverpool about thirty passengers. There had been no cholera in the wrecked vessel, and the persons taken from her saved only the clothing upon their persons. The vessel being healthy, all were allowed to go up to the city. Some of the first cases of cholera that occurred in the city were traced to these emigrants- From the above facts, the following conclusions are to be deduced with entire certainty:

"First, that with thorough cleansing and disinfecting (by chlorine or otherwise) of the baggage, clothing, or other effects that have been in contact with the secretions or excretions (or emanations from them) of cholera patients, the further development of the disease may be prevented.

"Second, that *unless the most entire isolation of all passengers in vessels from ports where the cholera prevails is enforced while this is being done, the disease is sure to manifest itself in the vicinity sooner or later.*

"Speculations as to the contagion or non-contagion, infection or non-infection, of the disease, are of no practical importance whatever."

The following extracts from the report of John Dwyer, M.D., Secretary to the Medical Board, Ward's Island, dated January 7, 1867, and contained in the annual report of the Commissioners of Emigration of the State of New York, for the year ending 31st December, 1866, has important bearings upon the relations of Asiatic cholera to quarantine.

"On the 14th of July 1866, a woman, McC., who had been employed as nurse some weeks previously on board one of the quarantine ships, came to Ward's Island to see her child, which was in the nursery. At 8 p. m. of the 15th two children in the nursery who had had communication with McC., were attacked with cholera. On the 16th Catherine B., a healthy woman, who was helper in ward 25, and who had been in company with McC., the preceding day, was attacked with cholera, and died the same evening after twelve hours sickness. The woman who washed the clothes of B., and who was also a helper in the same ward, was, on the 18th attacked with cholera and died the next day. On the 21st Emily N. was attacked with cholera in the same ward and died the next day. The epidemic then made its appearance in the old wash house building, containing the refuge for pregnant women, the residences of physicians, of employees, as also the soap making apartment and the bakery. It also appeared in several other detached wards, and in the Lunatic Asylum."

The contagiousness of cholera may be proved by its only known introduction here by means of the woman McC., although she asserted that her clothing had been purified before she left the quarantine ship, where cholera existed; by the case of Thomas M., a man who *volunteered as nurse* in the cholera ward, went there well on the evening of August the 3rd, attacked with cholera at 6 a. m., and died in three hours; this man being a volunteer, would not be likely to have taken fright—a cause which, I think, has superinduced cholera often. Again, Rosanna R., *another nurse in cholera ward*, died of cholera, as also her suckling baby. Fred. C., *also a nurse in cholera ward*, was attacked and prostrated with choleraic diarrhea.

Whilst every reputable and scientific remedy for cholera was tried, the result has not been more satisfactory than in former epidemics; but I believe it will be as favourable as that of any other hospital or city where correct records are kept. I cannot say that any member of the medical staff (and their experience has extended over several epidemics of cholera) has any confidence in treatment other than in the preventive and palliative.

The annual report of the resident physician of New York for 1865, says: "The fact which has been established by the detention, in quarantine, of the steamship "Atlanta," within seven miles of our shore, with the wind, for the most of the time, setting from that place toward the city, proves most conclusively that it is not an epidemic disease, and does not travel with great rapidity, as some authors would try to convince us. The disease is one that is, *sui generis*, created in India, from whence it has spread to other portions of the world, always following the channels of trade and commerce; and in the visitation of the disease upon this continent it can be traced distinctly to importation. It has never been generated on this continent, and can only exist here by importation."

Every one must admit the fact that filth, over-crowding, want of ventilation, of drainage and sewerage, and of an abundant supply of good and pure water, must, and do generate epidemic diseases, and will augment the number of cases of disease not otherwise epidemic, and greatly increase their malignity. These sources of propagation exist more or less in every city; but all these combined causes acting together, can never generate Asiatic cholera. As Dr. Sayer properly remarks: "They are nuisances which should be abated, as they do generate other diseases, and would materially add to our dangers if cholera were to be accidentally admitted. But a keg of gunpowder may remain in your basement without danger, unless it be ignited; it may remain there for all time, but never explode until the match is applied. So with these nuisances, which

already exist in the city; they are not the sources of cholera, and whatever other diseases they may produce, they will not develop cholera until the specific poison is introduced, by which the powder is ignited."

The principle of quarantine against Asiatic Cholera has at length been established in the United States, in Europe, and in India, with satisfactory results, and notably by the Cholera Conference at Constantinople, to which I have before alluded. The success has also been precisely in the ratio of its uniformity and absoluteness.

"New York," says the report of the resident physician, "is accessible by land as well as by sea, and unless the same quarantine regulations are enforced at every seaport town upon the entire coast, there is no security; but the disease, being imported into some of these seaport towns, may come to us by railroad communication. We, therefore, see the necessity for Congress or the General Government taking possession of this matter, and enforcing a uniformity of quarantine regulations at every port of entry. The Government establishes a port of entry, collects revenue, and has the right to close the port of entry, and should therefore perform the duties connected with a port of entry, one of which is a proper quarantine establishment, kept under military regulation, by which it may be rendered uniform and efficient. It sometimes happens that the port of entry, as in our own city, lies upon a river bordering on two States, and the port may be in one State, and the most advantageous place for a quarantine under the jurisdiction of another. This conflict of jurisdiction renders it essential that it should be placed under the control of the General Government. The General Government would not hesitate to take possession of any place where it could best protect the country from invasion by a foreign foe, irrespective of State boundaries or State jurisdiction, were it to come in the form of an armed fleet. How much more necessary, then, that the same precautions should be taken against a secret foe of pestilence and poison, vastly more destructive to human life than a fleet equipped with Armstrong guns! As there are also many ports of entry, it is necessary that the General Government should assume this control, in order that their action should be uniform."

The Surgeon General of the United States army has adopted the principle of contagion in reference to cholera as well as yellow fever, and has enforced a sytem of absolute quarantine as far as practicable throughout his jurisdiction, as appears by the "report on epidemic cholera and yellow fever in the army of the United States during the year 1867."

The instructions of the Surgeon General, as contained in Circular No. 3, were, to use "every endeavour to prevent the introduction of cholera

from infected commands or its conveyance from point to point by a *quarantine of observation;* upon all detachments of recruits or troops arriving or departing from depots, posts or recruiting stations, at or near which this disease prevailed:" and to make "prompt report of its appearance in commands, either *en route* or in garrison," to enforce "isolation of all cases as far as practicable."

The result of these instructions has been to secure a volume of indisputable evidence of the infectious, portable and communicable character of Asiatic Cholera. In every case, whether in the harbour of New York, at Governor's Island, or at Bedloe's Island, or in the Southern or Western portions of the Union, the same positive and unmistakable evidence appears of the first cases of the disease in a new locality having been conveyed by persons from an infected district. It will be seen by consulting that document, that cholera spread over the country during the year 1866, extending as far Westward as Forts Leavenworth, Riley and Gibson; and in the Southwest as far as Texas. In its progress the disease followed the lines of travel rather than any general westward course, and in the case of the army, it especially followed the movements of bodies of the troops, which were the most important movements from infected points during the year. In a general way," the report continues, "it may here be said that the experience of the army during 1867 confirms the views in favour of quarantine formed during 1866, and especially confirms the opinions formed with regard to the danger of distributing recruits or other bodies of troops from an infected point to other garrisons."

I would recommend the perusal of this valuable and able report to all who take any interest in the subject, and especially to such as are sceptical as to the efficiency of QUARANTINE FOR THE ARREST AND EXTINCTION OF ASIATIC CHOLERA.

*(To be continued.)*

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*Rectal Abscess*, By G. D. McCALLUM, M.D., Dunnville, Ontario.

In speaking of rectal abscess, it is unnecessary to review the structures involved and the course usually run by inflammation of the cellular tissue in this region, or to mention the danger of neglect in these cases. Every surgeon is fully aware of all these things; hence I do not intend saying anything upon those points, I merely purpose giving the treatment pursued in a very severe case, which occurred in my own practice, and in which a remedy was used, which to my knowledge has never heretofore been used in similar cases.

The patient, an old man aged sixty-five, in indigent circumstances, had been under the treatment of one of those wonder-mongering quacks yclept homeopaths, for about a fortnight before I saw him, and by that time the poor old man was nearly worn out with the irritative fever, which usually accompanies those cases, when the pus is confined.

The whole of the parts surrounding the anus seemed to be involved—were enormously inflamed and swollen; the scrotum was an immense size from effusion into its structures, and all the anterior part threatened to slough away, which it did, leaving both testicles entirely bare; he was in the greatest misery. Of course my first step was to allow the matter free exit, which I did by free incisions, from which escaped at least a pint of dark colored, highly perfumed pus. To show the extent of the mischief, the probe could be freely passed in all directions, to the full length. The cavity was next washed out by means of warm water and a syringe; after which *coal oil* was freely injected so as to be brought in contact with all the inner surface; the scrotum was also dressed with coal oil; he was put on tonics, whisky, and a good diet, and the succeeding night proved the first during which he had obtained any sleep for a week.

Under the use of injections of coal oil twice daily, the cavity being previously washed out with warm soap suds, the irritation rapidly ceased, the fœtor diminished, the further destruction of the parts checked, and the whole became a healthy granulating cavity, which rapidly filled up and closed; the scrotum also speedily diminished in size, and the testicles modestly retired again behind their natural covering. That the coal oil had a markedly soothing effect was proved by the fact that on being neglected one evening, the consequence was the patient had an exceedingly restless night and without any sleep. From this, and other cases in which I have used the remedy successfully, I am inclined to think coal oil as good if not the best dressing which can be applied in cases of extensive suppuration, and especially when the diseased action is of a low type; however, a medical friend had assured me that he had used it with the happiest results in a case of inflamed ulcer on the leg of an otherwise healthy, robust man; shortly after its application the pain was allayed, the parts assumed a whitish color and quickly healed over without further trouble. Again, we know that it is used with the very best results as an injection in dysentery, especially when the disease is confined to the lower bowel; it relieves the aching and tenesmus, almost immediately, and the surface quickly recovers its natural healthy state. Of course the experience of any one practitioner is not sufficient testimony to establish the reputation of any remedy, without doubt,

except in his own mind; still it should be sufficient to recommend it to the profession generally for further trial; if these remarks procure that for coal oil, the object for which they were written will have been accomplished.

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## HOSPITAL REPORTS.

(REPORTED BY MR. THOMAS ROGERS.)

*Sloughing Phagedæna, affecting the Penis.*

William S., aged 39 years, a native of England, was admitted into the Montreal General Hospital on the 19th of September, 1868.

State on admission,—He has a large slough situated at the extremity of the penis, on its dorsal aspect; it extends about two inches and a half in length, and involves the whole of the thickness of the prepuce. The slough seems to surround the organ, and from its appearance extends to the deeper structures.

Suffering as he is at present, from symptoms of delirium tremens, no direct history can, be acquired.

Ordered half diet, with the following extras: 1 pint of beef juice, 2 pints of porter, and the prescriptions, viz., ℞, Pulv. opii, gr. xij. in chart xij. div.: one every four hours. ℞, Quinine sulph. gr. xxiv, pot. chlorate ʒ i, acid muriatic ʒ ss, aquæ ℥ vj. take a table-spoonful three times a day.

The part sloughing was ordered to be placed in a poultice, consisting of equal parts of yeast and linseed meal. Yesterday the edges of the slough were touched with strong nitric acid.

Sept. 22nd.—Pulse to-day is 120, with skin dry but not hot; a thick creamy fur coats the tongue; the bowels have not been acted on since admission, but has no trouble in passing water. To have an injection, consisting of ℥ ii of turpentine given this evening.

Sept. 23rd.—The injection given last evening has operated well, and the pulse has fallen to 96. Skin remains at the same temperature, with total absence of moisture. Did not sleep any last night, and appears very uneasy, raving a good deal at times. Sol morph. mur. M xl. in a pint of porter.

Sept. 24th.—During the early part of last night, after having had the draught administered, was very restless, but towards morning fell asleep, and continued so for five hours, awaking very much refreshed. Pulse this morning is 100, and the tongue is moist and shows signs of cleaning. The skin is cool, and the countenance presents a more rational aspect, and the delirium almost entirely diappeared.

The slough to all appearances had been arrested, but to-day there appears a slight increase in its extent, on the under surface, although a line of demarcation is well marked all round.

Sept. 25th.—Is quite comfortable this morning, with a steady pulse of 92. The skin is moist, and the tongue slightly furred. The expression to all appearances is quite natural. The delirium has passed off altogether, and he slept sound all last night, without having any draught administered or even the porter.

The slough has nearly altogether separated, with the exception of about half an inch posteriorly; no bleeding whatever at any time; makes water freely and yesterday had a free stool.

Ordered carbolic acid dressing of the strength of 1 part to 20 of water; lint is saturated with this solution and kept constantly applied with a covering of oil silk, the further use of the poultice being suspended. Ordered a mutton chop.

Sept. 26th.—Having recovered entirely from the attack of delirium tremens, he gives the following account of his previous history.

He has been addicted to the use of intoxicating liquors for many years; he is married, and has a wife and three children. About a year before he was married had both gonorrhœa and chancre, with an interval of a month or six weeks between; both were well attended to by a medical practitioner and recovered, never having any *bubo*.

Had intercourse with a prostitute, for the first time since his marriage on the 5th September, 1868, and on the 11th September, first noticed the appearance of a sore, which he supposed to have been chancre. He still continued drinking freely, neglecting it altogether; never consulted any physician, but left it to take its own course.

Pulse to-day is 88, with skin quite natural, and tongue looking remarkably well. Slept well all last night without draught or porter. Does not complain of any pain whatever.

The slough is much darker in appearance to-day, but its inclination to spread is totally arrested, and the line of demarcation well marked.

Sept. 27th.—Pulse same as yesterday. To-day the slough was removed entirely without the occurrence of any hæmorrhage.

It appears to have penetrated deeply, as far back as the posterior part of the glans, that being removed entirely, though more superficially it appears to have extended probably to the extent of three inches.

Sept. 28th.—Pulse 80, with clear tongue and no heat of skin. His bowels opened twice to-day. Still makes water freely.

Oct. 1st.—His health is excellent, having an appetite for all the diet ordered him. The sore appears to be granulating beautifully around the

edges, and to prevent the granulations from closing up the orifice of the urethra a small piece of bougie is ordered to be inserted.

Oct. 5th.—To-day is so much improved as to be permitted to sit up dressed, for a few hours at a time. Having been receiving two pints of porter since his admission, one pint was taken off. The carbolic acid dressing to be changed for that of red wash.

Oct. 12th.—Upon examination to-day the sore was found entirely healed, and being anxious to leave Hospital was discharged by the attending physician.

*Hydrocele of Tunica Vaginalis—left side.*

John McG., aged 62 years, and born in Ireland, was admitted into the Montreal General Hospital, upon the 2nd of October, 1868, under the care of Dr. Fenwick.

Has always been much addicted to the use of intoxicating liquors, frequently submitting himself to the influence of cold and damp, as a result of which his sight became much affected. His employment for the past three years has been that of a sawyer, and having at times to raise large blocks of wood had to use considerable force, and a good deal of straining, to which he attributes the present enlargement of the scrotum.

About eighteen months ago he noticed for the first time the scrotum becoming swollen, but applied for no advice, supposing it to be rupture and that through time it would wear off.

The tumour is pyriform in shape, perfectly translucent, possessing distinct fluctuation; the testicle occupies the upper and posterior part. In measurement it is $12\frac{1}{2}$ inches in circumference, and about $11\frac{1}{2}$ in the long axis. The swelling took place slowly and with little or no uneasiness.

Has always been much subject to constipation of the bowels, often allowing from four to five days to pass without having a stool.

Oct. 8, 1868.—The operation for tapping the hydrocele was performed by Dr. Fenwick, and fluid to the amount of twenty-three ounces withdrawn, presenting a clear straw coloured appearance.

The radical treatment was adopted, using an injection of sulphate of zinc of the strength of ℥j to the pint.

Oct. 4th, 1868.—Suffered a little pain during the early part of last night, which gradually subsided towards morning. At the time of the visit he complained of considerable pain upon pressure, also of a good deal of heat. There is considerable swelling of the scrotum, due to the inflammatory action caused by the injection.

Oct. 7th. Slept well last night, and this morning is quite cheerful. There is no pain in the scrotum even upon considerable pressure; in size it has subsided nearly to that of its normal state.

Being somewhat costive was ordered a dose of castor oil, upon going to bed this evening.

Oct. 10th.—To-day, was found to be entirely cured and accordingly was discharged.

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## REVIEWS AND NOTICES OF BOOKS.

*The Science and Practice of Medicine.* By WILLIAM AITKEN, M.D., Professor of Pathology in the Army Medical School. Second American, from the Fifth enlarged and carefully revised London Edition, with large additions by Meredith Clymer, Ex-Professor of the Institute and Practice of Medicine in the University of New York, etc., etc. Vol. 1. Philadelphia: Lindsay & Blakeston, 1868; Montreal: Dawson Bros.

The rapidity with which the various editions of Dr. Aitken's works have been disposed of is a certain guarantee that the profession accepts it as the "representative" book on the subject of the theory and practice of medicine. It is not our intention to notice this second American, from the fifth London edition, at any length, as the volume reached us late in September. In a future number we may do so. For the present we will content ourselves with saying, that from the preface, we learn that Dr. Aitken passed some fifteen months in the revisal of the work, the result being an increase of fully one hundred pages of reading matter. Many of the subjects have been entirely re-written; among those so revised we notice Malignant Cholera, Paralysis, Epidemic Cerebro, Spinal Meningitis, and Intestinal Obstruction. When we come to notice the claims of the American editor, Dr. Clymer, we find that he has added quite a volume of his own, there being fully three hundred pages of his, interwoven through the work, upon subjects which have not been treated or only incidentally mentioned by Dr. Aitken. Many of these we consider exceedingly valuable contributions, especially those on Gonorrheal Rheumatism; Capillary Bronchitis, Chronic Pyemea, and Syphillitic Disease of the Liver. The subjects of Loco-Motor, Ataxy, Glosso-Pharyngeal Paralysis, Aphasia, Dilitation of the Bronchi &c. are for the first time incorporated in the book as text. They were

not mentioned in the fourth London edition, but were added by Dr. Clymer in his first American edition. We notice that Dr. Aitken's articles on these subjects are condensations, for the most part, from the articles of the American editor, which is a compliment exceedingly well deserved. The only exception is the article on Dilitation of the Bronchi, which is an abridgment of Dr. Stewart's excellent paper, which appeared in the Edinburgh *Medical and Surgical Journal*, for December, 1867. To commend such a volume to our readers is a pleasure, for no one who purchases it will be disappointed.

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*Diseases of Children, a Clinical Treatise, based on Lectures delivered at the Hospital for Sick Children, London.* By THOMAS HILLIER, M.D., London, Fellow of the Royal College of Physicians, &c., &c., &c. Philadelphia: Lindsay & Blakiston. Montreal: Dawson Bros.

Confessedly unsatisfactory is the treatment of disease in children, especially when the unfortunate little sufferers are of tender years, and unable to express by word or sign the nature of their ailment. Experience then becomes our guide, and even it at times fails to come to our aid. Unfortunately hospitals for the treatment of diseases incidental to infantile life, are but few in number on this continent, and the majority of graduates enter practice with but little experience in this class of affections. This state of things is much, very much, to be regretted, for no amount of study can possibly make up for the great want of clinical instruction. The fearful mortality of infantile life seems to us to be due to some extent, at all events, to our inability thoroughly to comprehend the character and nature of their diseases. Their study is, therefore, a subject of deep and powerful interest to the medical profession, and we confess that our literature on the subject is not very extensive. True, we have standard works, such as those of West and Churchill, but even these fail us at times when in search of information, and so in fact will every work on the subject. None are, none can be, from the tender years of the little patients, complete. But we confess to have been much pleased with our examination of the volume, the title of which heads this article. Its author, Dr. Hillier, has for a considerable period been attached to the Royal Children's Hospital, of London, and has a large fund of clinical experience, much of which he gives us in the form of monographs upon the most important diseases which attack children. All these are illustrated by cases, many of them really of very great value, and exceedingly well reported. Cases which have terminated fatally are given with

the *post mortem* appearances. These we consider are more valuable even than the report of successful ones, for no one can scientifically treat disease who does not comprehend the changes which it may cause in the human body. Dr. Hillier's volume is one which, while it will not and does not pretend to take the place of more systematic works, will be often found exceedingly useful. Its chapter on pneumonia is really a valuable contribution to our literature upon a disease which is exceedingly common in Canada in the spring and fall of the year, owing to the sudden changes of our temperature. Dr. Hillier has done good service to the study of infantile diseases by his contribution.

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*The First Step in Chemistry.* By Robert Galloway, F.C.S., etc., etc. Dublin: Fannin & Co.

This little manual, as its name implies, is intended for the use of beginners, and indeed the author claims in his preface to have succeeded by the method adopted in the book, in teaching chemistry to boys of ten and twelve, with as much success as the ordinary subjects of education. The author objects to the ordinary manuals and text books of chemistry, that they are encyclopædic instead of educational; valuable as works of reference, but of comparatively little use in teaching chemistry, or in training and developing the mind. He therefore proposes to teach chemistry in the same way as arithmetic, by a series of progressive exercises in the nomenclature and notation of the science, the construction of formulæ, the mode of expressing chemical changes, qualitative analysis etc:, the exercises being experimental as well as theoretical. That this plan is well suited to boys of ten or twelve years, who have unlimited time at their disposal, seems reasonable enough, but it would hardly answer when chemical physics, chemical philosophy, and the chemistry of the elements, organic and inorganic, have all to be crowded into one course of from four to six months. Besides, experience has shown that chemistry can be and constantly is successfully taught to adults by the system followed in the text-books, so that the author's objections may be set down as more theoretical than practical.

The book will commend itself to those who have to teach chemistry in common schools, or to such as purpose making themselves familiar with it without a teacher, but will hardly replace such manuals as those of Fownes, Youman, and Silliman.

Numerous inaccuracies are to be found in the work, some of them excusable, and some scarcely so; among the latter may be cited the following, which occurs on page fifty-five. "The particles of light,

caloric or the principle of heat, the electric fluids and ether, are the only known imponderable bodies." Such a statement is rather old-fashioned for the year 1868. On page 419 the water type is given as $\frac{H}{H}$ instead of $\frac{H}{H}O$. In numerous cases also the letter-press does not correspond with the engraving, making it difficult for learners to understand the apparatus and diagrams as intended.

On the other hand, most of the modern changes in chemical science are well described; the new notation is adopted in the second part of the volume and the new theories of types and atomicity of the elements and radicles are very clearly set forth. On this account the book will be found useful to those who have formerly studied chemistry, and who may wish to follow the recent improvements without wading through more extended treatises, and its numerous experimental exercises will recommend it to those who desire to improve themselves in manipulation.

Our author has our thanks for so kindly forwarding to us a copy of his work.

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*Physician's Visiting List*, 1869. Philadelphia: Lindsay & Blackiston. Montreal: Dawson Bros.

This little volume is invaluable to the physician, saving in a week ten times its cost. We have used it for several years, and can therefore speak from experience of its very great value. It is arranged for twenty-five, fifty, seventy-five, or a hundred patients weekly, contains General Memorandas, Addresses of Patients, Obstetric Engagements, Vaccination Engagements, &c., &c. It is small, and can with ease be carried in the pocket. A subscriber who purchased one last winter, upon our recommendation, writes us, "the Visiting List is deserving of all you said about it, and more; its use has been the means of saving me considerable money. I really wonder how I did so long without it."

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## PERISCOPIC DEPARTMENT.

### Medicine.

### A NEW TREATMENT FOR CHRONIC DYSENTERY.

By E. Malcolm Morse, M.D., San Francisco.

Chronic Dysentery generally means inflammation and ulceration of the large intestine. Instead of expecting a cure by giving medicines by the mouth, to act through the blood, or to travel ten yards before arriving at

the seat of the disease, or giving medicated enemas in so small a bulk that they are hardly sufficient to fill the rectum. I have been in the habit of washing out the whole rectum and colon by throwing up into the large intestine from two to five pints of Labarraque's solution of the chloride of soda, diluted, thus making a topical application to the ulcers, of one of the best, most cleansing, stimulating and healing solutions contained in our Pharmacœpeia. This remedy gives little or no pain, is perfectly safe, and may be considered a specific in uncomplicated ulceration of the large intestine. By uncomplicated ulceration of the large intestine, I mean dysentery not kept up by organic disease of the heart, or phthisis pulmonalis ; and not dependent on irremediable obstruction of the liver or spleen. For in each of these four cases the dysentery is produced by, or complicated with a more serious primary disease.

In presenting to the members of the medical profession, this plan of treatment for chronic dysentery, not found in any of the text books with which I am familiar, I would feel some hesitation, and not a little responsibility, did I not know that the theory itself is based on rational principles; and the success of the application of this theory as witnessed by myself during eleven years, is so marked that I can confidently recommend it as a safe cure for some of the worst cases of this formidable disease. I have seen patients that have been suffering for months and even years, with chronic dysentery, rescued by the application of these chloride of soda enemas, from the jaws of death.

The mortality in chronic dysentery, both under the old and the latest method of treatment, is very great.

On examination of the bellies of those who have died with this disease we find the mucous membrane of the large intestine extensively ulcerated; very often the ulcers are low down; they are found principally in the rectum and descending colon; often in the transverse colon and cæcum. Dr. Wood says: " The mucous membrane of the rectum and the lower portion of the colon always evince signs of inflammation in cases of death by dysentery. It is much reddened and thickened and not unfrequently ulcerated. Ulcers, in fact, exist in this disease more frequently than in any other acute inflammation of the alimentary canal, unless in the follicular enteritis of typhoid fever and small-pox. The danger is proportionate to the extent of the colon involved." Now, if we have a patient suffering from a simple ulcer in the mouth, we do not attempt to heal it by throwing up astringent or opiate enemas into his rectum; we apply the remedial agent directly to the seat of the injury. And if we have a patient with ulcers in the colon, why not apply the proper medicine at once to the proper place?

In order to get the patient into a proper condition to derive the most benefit from these injections, I am in the habit of pursuing the following method. I regulate his diet carefully, of course, and keep him in a recumbent position in order to assist the return of blood from the engorged mesenteric veins, and those smaller tributaries which are distributed along the large intestine. This state of engorgement prevents the ulcers from healing, and renders each ulcer an outlet from which, in blood and serum, the stream of life ebbs out like water from the tubs of the daughters of Danaus. At day-break on every alternative or fourth day, I give a mild cathartic or aperient, in order to clear out the alimentary canal. The ordinary contents of the intestine produce great irritation when it is in this engorged and hyperæsthetic condition; and it is better to get rid of the fæces about the same time, instead of letting them run in driblets over the raw surface every hour or two. After the cathartic or aperient has acted sufficiently, I inject very slowly from two to four pints of Labarraque's solution of chloride of soda, diluted, into the large intestine; in this way it becomes a topical application. The right strength for the first enema, is twenty parts of water to one of Labarraque's solution. I inject as much of this mixture as he can be made to retain. Two or three pints will generally be enough. Sometimes as much as five pints may be given. Each enema should be made a little stronger, until the patient can feel it smart or burn. When this happens the solution is of the proper strength. The patient should be on his right side, or on his knees with his head low down, while these enemas are being administered. Occasionally it is necessary for him to change his position several times, in order that the wash may reach every point where it is needed. Should there be much tenesmus after the injection has been passed, I give an enema of the tinct· opii, or an opium suppository. These applications of the chloride of soda should generally be made once a day. Occasionally it is necessary to give them twice a day; and sometimes on account of the sensitiveness of the ulcers as they begin to heal, it is better to leave them off far several days, or give weaker solutions. The next indication in the treatment, after cleaning out the alimentary canal and washing the ulcers with the medicated solution, is to keep the bowels quiet, so that the ulcers may remain clean and heal up under the topical application. In suggesting the means of accomplishing this desideratum, I am getting upon very debatable ground. The old proverb, "tot homines tot sententiones" must certainly have been arms intended for physicians. Each one of us has his own way of using the with which we combat disease. I generally give large doses of subnitrate of bismuth, three times a day; repeated opiate enemas and suppositories,

in order not to disorder the stomach; Dover's powders, repeated if necessary; charcoal, or the mineral and vegetable astringents; the ant-acids, leeches and fomentations; taking great care to *keep up* the effect of the medicine, by giving them every hour or two. If one drug fails I try another, or give a combination of several of them; in order to have as few stools as possible passing over the ulcerated surfaces while they are healing.—*California Medical Gazette.*

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## A CASE OF ACUTE CHOREA SUCCESSFULLY TREATED BY THE EXTRACT OF CALABAR BEAN.

By Thomas Bennett, M.D.

In that really excellent work on medicine now in course of publication in England, and edited by Dr. Reynolds, in which the best men of the day in that country have written on subjects they best understand—we naturally expect, and we are not disappointed in finding, all that is modern and all that is worth knowing on the pathology and therapeutics of disease.

In the second volume, which is devoted to *General Nervous Diseases*, Dr. C. B. Radcliffe, in his article on chorea, says: "Nothing can be more perplexing than the statements made by various authorities respect the efficacy of remedial agents in the treatment of chorea. Few voices, it is true, are now raised in favour of the old-fashioned anti-phlogistic way of treatment, in which blood-letting, and purgatives, and low diet figured so conspicuously; but beyond this, all that is uttered seems to be dictated by the spirit of contradiction or scepticism. Indeed, so little unanimity of opinion is there, respecting the treatment which ought to be pursued in chorea, that the only course is for each one to glance at the remedial agents recommended, to weigh the statements made respecting them as well as he can, and to take upon himself the responsibility of deciding upon his own course of action." He then goes on to enumerate the various remedial agents that have been found useful.

Sir Thomas Watson and Dr. Elliotson rely, as a rule, mainly on some preparation of iron. With others, sulphate of zinc is the favourite. Then we have advocates of arsenic, strychnine, tartar emetic, the iodide and bromide of potassium, turpentine and ammonia. Dr. Radcliffe says that his plan of treatment for an ordinary case of chorea is to give cod liver oil in conjunction with hypophosphate of soda; and to combine with it, according to circumstances, camphor or ammonia, or both; he adds the sesquicarbonate of ammonia to the draught containing the hypophosphite, and dissolves the camphor in the cod liver oil He has added arsenic to the hypophosphite and cod liver oil and has been satisfied with the result.

It is in view of the uncertainty of these conflicting favourites, and in the hope of abating somewhat the disappointment all must have felt in the treatment of this disease, that I am induced to narrate the striking benefit derived from the use of the extract of calabar bean (physostigmatis faba) in a case of acute chorea.

I am sorry I have no notes of the case; it occurred, however, recently, and its details are so vividly fixed in my mind, that I can give a truthful description of it:

M. A, fourteen years old, a stout girl, of full habit of body, very large for her age, had once menstruated. Her mother for some time had observed a certain awkwardness of gait, and a jerking way of taking hold of any object; and thinking it was only a child's trick, rested satisfied with reprimanding her for it. She, however, got daily worse, till at last she was not an instant quiet, and was unable to hold anything in her hands or even walk across the room. Being then sent for, I found her in the condition just described; her face was flushed, saliva escaped constantly from her mouth, her tongue was loaded with thick brownish fur, and her bowels were obstinately constipated. I ordered her a drachm of turpentine in an ounce of castor oil that night, and a mixture containing valerianate of zinc for the next day. Two days after, I saw her again, and found all her symptoms much aggravated—incessant violent motions of arms and legs, and considerable difficulty in speaking. A repetition of the oil and a continuance of the mixture was ordered; but these measures had not the least control over the disease, and after the interval of a week her condition was pitiable in the extreme. Her countenance now was semi-idiotic; she was deprived of her power of speech, and her ability to swallow was almost gone; her wrists, elbows and knees were deprived of their cuticle from constant rubbing; all voluntary power over her muscles was lost; she was not one instant quiet, but incessantly threw herself about with sudden violent jerks in extraordinary attitudes—at one moment she would jump on her feet and as quickly fall back; at another her arms would be rapidly thrown behind her back and then twisted. Sometimes her relatives would try to keep her quiet by holding her down on the bed, but the chronic strugglings were too powerful for her father, a strong muscular man; she would writhe from under him during these paroxysms, though he both held and threw his whole weight upon her. During these terrible attacks she would utter piercing cries, and her mouth would be covered with bloody foam caused by the constant working of her jaws and the biting of her lips and tongue. Night brought no relief, as sleep was entirely absent.

Finding that the treatment hitherto had been entirely useless, I now

ordered the eighth of a grain of the spirituous extract of calabar bean, to be given every two hours, and an occasional spoonful of egg beaten up with brandy, so as to recruit her exhausted nervous system. The beneficial effect of the physostigma was most marked. In twenty-four hours the violent paroxysms had all but ceased; the second night she slept quietly for seven hours, and awoke with countenance less flushed and more intelligent; she was able to take a little food and also to speak, although in a thick an hesitating manner. The medicine was ordered to be continued, and at the expiration of four days all that remained of the choreic symptoms was some little muscular twitchings; but she had sufficient power over her hands to pick the kernel from a hickory nut, at which occupation I found her at my visit. The calabar bean was now discontinued, and its place substituted by iron and quinine, with a dose of black draught every other morning, as her bowels continued constipated. She rapidly convalesced, and I took leave of her when she went into the country for a change of air.

I am fully aware that not much reliance can be placed on a single trial of the calabar bean in an acute case of this disturbance of the nervous system; but I report it with the hope that others may be induced to give it a trial, and may meet with a similar successful result.—*California Medical Gazette.*

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## THERAPEUTIC MEMORANDA.

By John Addington Symonds, M.D., F.R.S.E. From British Medical Journal. Analysis by Prof. James M. Holloway, Louisville, Knty.

*Asthma.*—As a guide to treatment, asthma is divided into: (*a*) the kind in which *spasm* predominates, with or without *emphysema*; (*b*) the kind in which there is *bronchitis* or *bronchorrhœa* with the spasm.

*Treatment.*—Spasm relieved by remedies named in order according to their value; chloroform inhalation, ether, nitrous vapor, belladonna, stramonium, opium. The danger of chloroform arises from its great power; the patient is prone to use it in excess. Belladonna (Battley's liquor B, preferred) combined with bicarbonate of potassa, acts promptly. When bronchitis is present, add wine of ipecac. When there is less congestion, and a mucus flux relieves, add squill. Because of the physiological and anatomical relation between circulation of blood in lungsad liv ercholagogues and purgatives (mercurials) are indicated. During intervals between paroxysms, long courses of oxide of zinc and quinine, combined with conium. The young and vigorous should take shower baths, and patients of all ages should pay strict attention to diet, and to regulation of bowels.

*Pleurisy*.—Can always be promptly relieved, if discovered early; a few leeches, or hot fomentations, or poultices, with absolute rest in bed, will enable the patient to go about in a day or two. But the majority of cases are not discovered until more or less effusion has taken place. It may begin by a small patch, over base of lungs, simulating neuralgia, or upon diaphragm, simulating, by reflected pain in shoulder, liver trouble. In such cases, during first week, treatment should be rest in bed, blisters every two or three days, on anterior, posterior and lateral regions; alkaline carbonates, combined with spirits nitrous ether and antimony; a nightly anodyne, combined with mercurial; slight ptyalism not to be feared, though not regardrd as necessary to a cure.

Second week: continue alkaline carbonates, with potassi iodidi, digitalis and squill. Hydragogues, when they can be borne, hasten the cure. When this treatment fails, thoracentesis is indicated—more favourable in young subjects. All the fluid should not be removed at once; patient should lie on affected side, the artificial orifice resting upon a large poultice.

There is a certain form of acute pleurisy, occurring most in persons passing from middle to riper years, which attacks the diaphragmatic portion of the pleural sac of left side, that does not yield to any plan of treatment. The patient is suddenly overwhelmed with dyspnœa, piercing pain in left side, "pinning him to the bed." The cardiac (vital) power runs rapidly down. *Post mortem* does not show cardiac complication; "but the vicinity of the heart makes one think that there must have been some morbid impression on its nerves, illustrating what used to be called the sympathy of contiguity."

Note.—Bowditch's exhausting syringe is not mentioned by the writer. With it, the effusion in pleural sac can be completely removed, allowing the lung, if not confined by old adhesions, to expand and refill the normal space. This seems to be the only real benefit to be derived from the employment of such an apparatus; not, as is claimed for it, that the atmospheric air is, also, excluded. The appearance of pus after thoracentesis does not depend upon the introduction of atmospheric air; the large number of cases of empyema on record requiring the emyloyment of the trocar prove this. The introduction of air into the pleural sac can only hasten the decomposition of the already effused fluids; it exerts no influence on vitalized tissues, even when there is low vitality. Neither can the introduction of atmospheric air prevent the expansion of the lung. It collapses the lungs in the cadaver, but not before death. The object, then, in treatment by thoracentesis is solely to get rid of all the fluid (whatever be its character) in the cavity, and to establish such a perfect system of drainage as to prevent reaccumulation.

*Pneumonia.*—Experience in treatment accords with that of Allison, Christison, Stokes, William and Law, to the effect that a great difference has been required in the treatment of pneumonias of the last few years. That the type of the disease differs—now sthenic, now asthenic. At the present time, full and frequently repeated doses of bicarbonate of potassa, with spirit of nitric ether, antimonials or ipecac, with poultices and blisters, are the remedies to begin with. "Beef tea, champagne and soda water, in equal proportion, and milk and soda water are prominent in the dietetics." Weakness and frequency of pulse and nervous debility call for brandy and ammonia. In such cases the pulse becomes less frequent, fuller and more steady under stimulation. Expectoration, when free, should not be checked by an untimely opiate. [The author evidently means that opium, in full doses, is contra-indicated when the air tubes and vesicles are clogged with mucus from the co-existing bronchitis.]

*Phthisis.*—In the first stage, treatment consists in gentle exercise, active and passive, riding, sailing in pure air, and nutritious, digestible food and moderate stimulation. If other members of the family have succumbed, urge a voyage or change of climate. Since 1846, the profession, generally, have relied mainly upon cod liver oil as a therapeutic agent, capable of staying the progress of the disease in many cases, and, in some, effecting a cure. This remedy was introduced in 1841 by Bennett, and Dr. C. B. Williams came to his assistance, when it was needed to overcome the scepticism of the majority. "Three principal facts are adverse to a cure: strong family predisposition; an extensive amount of deposit in the lungs, and the complication of ulcerative laryngitis."

*Details of Treatment.*—Cod liver oil when it can be tolerated by the stomach. Dont despair of a patient's taking it, until it has been disguised in highly flavoured emulsions, or with a strong acid or a bitter. If the pure oil will not be digested, congeal and filter it, so as to retain the oleine and get rid of the stearine. If necessary, give pancreatine along with the oil so as to increase the rapidity of its absorption.

In connection with the oil, use small blisters, applied beneath clavicle, frequently repeated; a morning dose of quinine, with iron added; a sedative for cough at night; nutritious diet, always including milk and eggs.

When the above treatment seems to stay the progress of the disease, the patient not losing flesh and strength, but still annoyed by excessive expectoration, and no improvement in lungs shown by physical exploration, decided benefit will follow the addition of ten to fifteen grains of

chlorate of potassa, in plain or barley water, three times daily. An abatement of the ulceration follows.

When the oil is not tolerated, resort may be had to the use of sugar and eggs as a substitute. Feed the patient on all sorts of nick-nacks, besides increasing the allowance of sugar in tea and coffee and dessert.

*Tubercular Hæmoptysis.*—In the early stages when dependent upon congestion, the bleeding is not usually profuse, and needs no treatment farther than rest, relief from fear and anxiety, cooling drinks and a *placebo* ("a remedy of infinite value in this and all other diseases attended with disproportionate anxiety.") When there is lung disorganization and the loss of blood reaches or exceeds a half-pint, digitalis, gallic acid, turpentime and acetate of lead are indicated. The digitalis, given in doses of 20 minims every three hours for six doses and then at longer intervals, controls the action of the heart. If there is fever, give alkalies and anodynes before resorting to direct astringents. Frequently, the emploment of tartar emetic and ipecac, in doses sufficiently large to induce vomiting, have succeeded in suddenly checking the hæmorrhage. Acetate of lead, in five grain doses, with twenty to thirty minims of dilute acid sulphuric and ten grains of magnesiæ sulphatis, repeated every two or three hours. In severe cases, the local application of ice, pounded and inclosed in a bladder, acts promptly. Venesection is sometimes indicated upon the grounds that "the flow of blood from a vein lessens the hydrostatic pressure throughout the body;" secondly, "the heart's impulse is modulated;" thirdly, "a faintness ensues and there is contraction of the terminal arteries and a disposition of the blood to coagulate."

"Old remedies, like old friends, are not to be forgotten, though we may no longer lean on their help."

NOTE.—No allusion is made to the employment of the atomizer in the local administration of astringents to the bleeding surface. A trial should never be omitted.—*Louisville and Richmond Medical Journal.*

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## THREE CASES OF MITRAL DISEASE, IN WHICH THERE WERE NO MURMURS ON ACCOUNT OF THE INTENSITY OF THE VALVULAR LESION.

By LAWSON TAIT.

In the summer of 1866 I placed a young Irishman under the care of my much-lamented friend, the late Dr. Scoresby-Jackson. The patient was about twenty-four years of age, and suffered from rheumatic fever about five years previous to the time I first saw him. The history of his

illness pointed to pericarditis as the lesion from which he had suffered; but no very definite history could be obtained.

The appearance presented by him was not very much that of a man suffering from heart-disease. He was breathless in going up a hill, complained of uneasiness over his heart, and great weakness. At first sight I took his case to be one of phthisis; but examination did not give any reason to support this. The action of the heart was irregular, or rather every now and then there occurred an interval of rather greater length than a beat, during which the heart seemed to be still and then there was very markedly that vermicular motion under the skin supposed to indicate adherent pericardium. The latter, indeed, was the condition that I diagnosed; and Dr. Jackson agreed that this probably was the case. The patient was examined by several competent stethoscopists, and while several concurred with us, none, if I remember rightly, suggested mitral disease. The patient left hospital, and died in three weeks. After a very great deal of trouble I got permission to examine the condition of the heart, and found, very much to my surprise, not only that the pericardium was not adherent, but that, with the exception of a few milk-spots it was perfectly healthy. The heart was considerably hypertrophied. The mitral valve admitted only the fore-finger, and was perfectly rigid, being, in fact, only a ring of calcareous matter, from which the endocardium on the upper side had been denuded by ulceration. Many of the *chordeæ tendineæ* were ruptured, or had been ulcerated through.

J. G., æt. 37, had never suffered from any form of rheumatism, but for the last five years had suffered from symptoms which led his medical attendant to believe that he had some form of disease of the heart. He presented an extremely anæmic appearance, had some general symptoms, such as slight cough, occasional bloody sputum, breathlessness on exertion; but there was no murmur, only the same irregular and tumultuous action of the heart. I had no means of registering the heart's action, but it might be roughly represented thus, taking the period from the beginning of one beat to the beginning of another as 5 :—

5 : 5 : 12 : 5 : 3 : 3 : 5 : 5 : 12 :

From the above conditions I suggested mitral disease as the cause of his symptoms, and ventured to diagnose a condition similar to the case first mentioned. He died in a few months, and I found my diagnosis most singularly well established; the mitral orifice would not admit the fore-finger, and it only wanted an extension of the deposit for an eighth of an inch at one spot to make it a complete circle of cretaceous material. The endocardium seemed to be still intact over the foreign substance. The heart was considerably hypertrophied. As both the above examina-

tions had to be conducted hurriedly in private houses, with friends of the deceased looking on, weights and measurements could not be more accurately taken.

A. P., æt. 29, presented an extremely anæmic condition. A year before I saw her, she had her right breast removed for malignant disease, in St. Mary's Hospital, Manchester. For some months after her recovery she acted as a barmaid, and enjoyed fair health. About seven months after the operation she found that on any unusual exertion she became breathless, and this increased so rapidly, that in two months more she had to give up work. Her condition, when I saw her, indicated serious disease; and from the physical signs being identical with those of the second case, I diagnosed mitral constriction with inelasticity of the valvular appendages. The question came up—Might it be malignant disease? and I was inclined to believe that it was. The fatal issue occurred three weeks after she came under my care, and post-mortem examination showed that I was right as to the condition of the valve, but wrong as to the disease. The valve admitted the middle-finger, and both flaps were much ulcerated on the upper surface. The disease was ordinary atheroma, softer, however, than in the other two cases, and extended completely round the orifice. The aortic valve had only two segments, and the pericardium was congenitally absent.

That the intensity of the murmur has no general relationship to the amount of lesion, and that many very serious forms of heart affection are entirely without murmur, are facts well understood and frequently insisted on; but that the murmur in valvular affections may be in abeyance from the very intensity of the disease, is a condition not so generally recognized.—*Medical Press and Circular.*

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## Surgery.

### ALCOHOL AS A DRESSING TO SURGICAL AND TRAUMATIC WOUNDS.

By W. F. McNutt, M.D., M.R.C.S.E., L.R.C.P.E., etc. Late Surgeon U. S. N., Visiting Physician to S. F. Dispensary, etc.

The treatment of wounds by the local application of alcohol has at least the dignity of age as a recommendation. As a dressing to wounds, it was used in some form by Hippocrates, Galen, Percy, Ambrose Paré, etc., etc. But, at the present time, it may be said to have fallen into general discredit, or at least into genera disuse, as a remedial agent for

the dressing of wounds. However, it is still held in the very highest esteem by some of the masters of surgery, both in their private practice and in their hospital wards.

In 1864 and 1865, I followed M. Nélaton in the wards of l'Hospital des Chinque, where he uses this dressing, to the exclusion of all others, to incised and traumatic wounds and suppurating surfaces, from whatever cause. His wards were nearly free from the heavy, disagreeable odour so common to surgical wards. Wounds granulated with but very little pus; and pyæmia, so common in Parisian hospitals, was almost never seen. I have used it before and since that time with equally satisfactory results. I am led to believe that the reason why alcohol is not used more extensively as a dressing to wounds at the present time, is not because surgeons have tried it and abandoned it, but because they have not given it a trial. We hope that, by calling the attention of the profession to its well known advantages, some at least will be induced to give it a trial.

M. Nélaton mostly uses brandy with a little camphor dissolved in it and diluted to suit the requirements of each case. As alcohol is absorbed when applied to denuded surfaces, it is necessary to dilute the solution according to the size of the denuded surface, and to the susceptibility of the patient. I have seen a patient quite intoxicated from the absorption of brandy that had been applied as a dressing to a very large suppurating surface. When a wound shows, by its pale looking granulations, that a stimulating dressing is demanded, and the general state of the system also requires stimulating, the form of alcohol used may not require any dilution. I have used whisky pure or diluted, but prefer alcohol, diluted as occasion may require, with camphor-water. Though M. Nélaton mostly used "eau-de-vie camphrée," I do not know as he considered the camphor a very important addition to the alcohol. The camphor however, would seem to be of very good service as a local stimulant and disinfectant.

Alcohol when applied to a recent wound, incised or traumatic, coagulates the soluble albumen on its surface, corrugates the tissues and contracts the open mouths of the capillary and lymphatic vessels. By sponging the flaps with this dressing after amputation, for from fifteen to thirty minutes, before bringing them together, and by applying some charpie saturated in the same along the edges of the wound, after they have been brought together by sutures, we have given them the very best possible chance to adhere by first intention. Instead of bringing together two soft, oozing surfaces, which are most sure not to adhere by first intention, we have, by the action of this alcoholic dressing, corru-

gated and contracted the tissues and vessels, and coagulated the albumen, so that the two surfaces, when brought together, are almost sure to give primary union.

In cases of ablation of tumours and of incised or traumatic wounds, where it is proposed to bring the edges together by sutures, we treat them exactly as we do the flaps after amputation, sponging the cavities or the wounds with the alcoholic dressing for from fifteen to thirty minutes before bringing them together with sutures, in order to prevent the accumulation of blood or serum in the cavity, which would necessarily prevent primary union.

As an application to granulating and suppurating surfaces, alcohol certainly possesses advantages over most other dressings. The indications in such wounds being to promote granulations and prevent purulent absorption, we make *sublata causâ lollitur effectus* our surgical motto, and stimulate the wound to granulations, at the same time preventing the purulent absorption, by preventing the formation of pus.

To those who believe that pus is the result of an exudation, and that germs arise in the exudation, which by a continuous fermentation of cells, produces pus. we would say that alcohol destroys pus corpuscles, and therefore prevents their propagation. To those who believe that pus is produced as the result of the proliferation of the tissue—that is, believe that pus is the result of dissolved tissue—we would say that alcohol is an excellent antiseptic, as it preserves so well animal tissue. Alcohol, then, as a dressing applied to suppurating wounds, proves a preventative to pyæmia, by preventing the formation of pus. Then again, a solution containing alcohol is not as readily absorbed by animal membrane as an aqueous solution. Besides the local effects of alcohol to the wounds, it possesses the advantage of being a stimulant to the general system, by its being absorbed.

M. Nélaton's method of applying this dressing is to saturate charpie in the solution prepared for use, and spread it over the wound. He keeps the charpie covered with oil-silk, and changes it as often as is necessary to keep the charpie wet.

The advantages claimed, then, for alcohol as a dressing to surgical and traumatic wounds, are, that in recent wounds, it coagulates the soluble albumen on the surface of the wound, corrugates the tissues, and contracts the small vessels, thereby preventing the accumulation of blood or serum between flaps or the edges of wounds, which would necessarily prevent primary union.

Applied as a dressing to granulating wounds, it acts as a local stimulant, prevents largely the formation of pus, lessens the chances of the

patient's having pyæmia, is an excellent disinfectant, and possesses the advantage of being a stimulant to the general system.—*California Medical Gazette.*

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## A CASE OF ILEUS SUCCESSFULLY TREATED BY ELECTRICITY.

Under the care of T. A. Vesey, A.B., M.B., T.C.D.

On July 14, 1868, I was called to see John Hughes, aged 59, a pensioner. Always healthy. Three months since was treated for enteralgia; subject to constipation. On the 12th, his bowels not being moved for two days, he took a dose of castor oil, followed by senna and salts, without effect.

*Present Symptoms.*—Spasmodic pain, starting from a hard moveable mass to the right of the umbilical region; pressure here caused increased pain; belly tympanitic; lineæ transversæ deeply marked; face pale, anxious; eyes sunken, dull; skin cool, clammy; feet and hands cold; tongue coated; vomiting (not stercoraceous) set in same morning; constant loud gurgling in bowels; pulse 94, fair volume.

*Treatment.*—A sinapism, followed by turpentine stupes, an emollient enema (3 pints) was given by a long tube, and retained one hour; came away unchanged; turpentine enema twice administered without carrying away any fæcal matter. Subsequently a 3 pint enema of warm oil (Dr. Head, Carlisle) brought away a trace of fæces.

No purgatives by the mouth; belladonna and opium in full doses with relief to pain, spasms, and vomiting.

15th.—Passed a tolerable night; had some sleep, pain less; abdomen becoming tender; pulse 104; vomiting very troublesome since 4 A.M.

Finding that the measures adopted for his relief did not produce any good effect, I determined to use electricity, applied as follows:—

Patient being placed on the left side, a "Radford's Uterine Director" was introduced into the rectum, and the negative wire of the electric machine attached to it. The sponge attached to the positive pole was rapidly passed over the whole abdomen from cœcum to left iliac region. This caused intolerable agony, as all the abdominal muscles were thrown into violent action. The electricity was applied (at intervals) with gradually increased power for half-an-hour, when such exhaustion was produced that it was discontinued,

As he complained much of pain in the back, a vulcanite hot-water bag was applied to it with relief.

In two hours after the use of the electricity, he had several copious, dark-coloured, offensive stools. During the rest of the day and night ollowing, his bowels were moved twelve times. The pain disappeared, the hard mass was so much reduced as to be made out with difficulty. He made a rapid convalescence.

The failure of the ordinary measures in this case induced me to try the effect of electricity, and the successful issue furnishes additional evidence of the great therapeutical value of electricity in the treatment of ileus.

In the ninety-sixth number of the *Dublin Quarterly Journal of Medical Science*, will be found a case reported by Dr. Finney, in which electricity was used on Dr. Stokes' recommendation. It was the recollection of that case, and the favourable result, that gave me confidence in the trial of a similar remedy, and happily with similar good fortune. The battery used was a Davis and Kidder's electro-magnetic machine.—*Med. Press.*

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## A GENUINE HERMAPHRODITE.

By Henry N. Avery, M.D., of Poughkeepsie, N.Y.

The following is such a wonderful case, and being as near a hermaphrodite as anything can be, notwithstanding the evidence that nothing of the kind can exist, I report it for the novelty of the case, rather than the operation.

August 16th, 1868, Christie Ann C———, called upon me for advice, giving the following answers to my questions. After stating that she was a native of Nova Scotia, and had just arrived in this city to see a sister living here, and seek surgical aid in the States; unmarried; twenty-four years of age; five feet ten inches high; enjoying comparatively good health; occupied during the past two years in teaching school, and that she had a *growth* upon her privates.

From observation, I discovered that she possessed a deep, coarse voice, a masculine frame and face; in fact, resembling an ordinary coarse woman.

After a careful examination, to my surprise, I found the following to exist; the mamma were undeveloped; the clitoris, resembling a penis in flaccid state, was two inches long, and half-an-inch in diameter, with well developed gland and foreskin. No orifice was discovered. A vagina two inches deep, well formed, existed, but a close examination per rectum and bladder, could not discover any trace of a uterus; the meatus urinarius and vestibule were perfect; the right labium majorum was quite natural and of usual size; the labia minora were traceable, but in the folds of the left labium there appeared a large pendant tumour, resembling the left *testicle* of a man, with a well developed scrotum of usual size, of some four inches in length, resembling in every respect the scrotum. Tracing what appeared to be the cord up, I found it made its exit from the external abdominal ring, and having every indication of a spermatic cord; the epididymis appeared to be natural; in fact, everything resembled a *testicle.*

She stated that she felt some sexual desire, and that every morning for the past six years, she had vomited, on rising from bed, a small quantity of blood. To my question as to how long the tumour had existed, she stated that she had noticed nothing until she was ten years of age.

Her object in coming to me was, she said, to see if I could remove the tumour, as it annoyed her. The physician at home, the only one she had ever shown it to, stated that he could do nothing for her.

Being placed in somewhat of an embarrassing position, in discovering so much more than I expected to find, I resolved to call a consultation, to see if my diagnosis of a *testicle* would be confirmed. Accordingly Drs. J. S. P. Lord, E. H. Parker, and my brother, Dr. E. W. Avery, all of this city, were called in, when they all agreed that it resembled in every respect a *testicle*, but the case being so extraordinary they could not form any diagnosis, but advised an operation.

With the assistance of Dr. Lord and Dr. E. W. Avery, I proceeded to perform the operation, by removing the tumour by the usual process for castration, by making an incision of some five inches in length, so as to expose the cord, which was found with three arteries that were ligated, and several smaller ones, a large nerve, veins, etc.; severing the cord, the retraction was the same that might be expected in performing the operation upon a man; the tumour was then dissected out, the wound partially closed, and the patient placed in bed.

After removal, the tumour was examined by Dr. Lord, Dr. E. W. Avery and myself, with a microscope magnifying 350 times, when cellular structure and convoluted tubes were visible, with rudimentary spermatozoa; in fact, it was declared a *testicle*.

Mounted specimens of the tubes for the microscope have been prepared, and photographs of the woman will be preserved.

This being the only case, I believe, on record, where a *testicle* has been discovered in a *woman*, it will naturally interest many. The *fact* can now be settled, that such a thing as a hermaphrodite has existed.

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## ANTI SUNBURN POMADE.

The following is a really good and equally simple recipe to prevent the skin from cracking, and to remove sunburns. Melt two ounces of spermaceti in a pipkin, and add two ounces of oil of almonds, and when they are intimately combined stir in a teaspoonful of fine honey—stir the mixture until cold, or the materials will harden separately. This pomade should be applied at night after washing the skin, and should be allowed to remain on until morning.—*Journal of Applied Chemistry.*

# Canada Medical Journal.

MONTREAL, NOVEMBER, 1868.

We have great pleasure in announcing to our readers that we have secured the valuable co-operation of Dr. William Bayard, of St. Johns, N.B., as our corresponding editor for the Province of New Brunswick. He will supply us with all that is interesting concerning the profession there.

## CONFUSION.—THE MEDICAL COLLEGES OF PHILADELPHIA.

In our issue of July we stated that a certain member of our profession, who had been practising in the city of Toronto, and had for some time held an appointment of teacher in the Toronto School of Medicine, had accepted a Professorship in "The Philadelphia University of Medicine and Surgery." It was our belief in making that announcement that the institution mentioned was the "University of Pennsylvania," an old and respected School of Medicine. Our attention having subsequently been directed to the matter, we learned, with considerable annoyance, that the "Philadelphia University of Medicine and Surgery" had no claim to honourable notice. We have examined the back numbers of the *Medical and Surgical Reporter* of Philadelphia, and find in the number for July 6, 1867, the following:

"There are two colleges in this city where legitimate, rational medicine is taught, the Medical Department of the University of Pennsylvania, and the Jefferson Medical College. Both these schools have able faculties, and full classes, and are well known as the leading schools of the country.

"We mention these facts simply to say that the Legislatare of our State has, very improperly as we think, granted charters to one or two irregular schools of Medicine located in this city, which have assumed a portion of the coporate title of one of our oldest regular schools, which, as an institution of learning, has long been a credit to our State, and the pride of our city. We know that a few students have been deceived by the advertisements of these irregular schools, into taking their tickets, and found out their error when it was too late.

"But efforts of this kind will not succeed; they may, as they have done, inveigle a few students into their doors, but the staple of the lectures delivered, will not satisfy the desires of the genuine student, and the very means made use of to bring them into notoriety will be their ultimate destruction.

"One of these concerns recently had the effrontery to endeavour to inveigle into their faculty a prominent member of our profession in a neighbouring city, by making false representations to him; but, fortunately for his reputation, he was advised of the character of the school before he had in the slightest degree committed himself."

In view of the foregoing we would wish to believe that the person spoken of from Toronto, had been entrapped into an institution, the character of which seems to be so disreputable. At present the circumstances of the case will hardly permit us to accept that belief. We will, however, await the necessary time to see whether a full and unequivocal condemnation of that individual is demanded. In the meantime we desire to call attention to the institution which possesses so unenviable a reputation among the regular members of the profession in Philadelphia. Those of our readers who read the proceedings of the British Medical Association in Dublin of last year will have noticed a charge made by Dr. Corrigan, of Dublin, that the "Medical department of the University of Pennsylvania gives the degree of Medical Doctor *in absentia*—and that for the sum of £32 10s.

The *Reporter*, after pointing out the untruthfulness of that charge, remarks, "*Apropos* of that subject of the sale of diplomas, we are creditably informed that an Englishman, a D.D., L.L.D., and M.D.,! (?) is engaged in this country in the sale of the diplomas of a certain regular school. It may be the same institution has its agents in England, who taking advantage of the ignorance of our institutions, that is too prevalent abroad, have assumed a name resembling that of our venerable University." We believe we are perfectly correct in saying that the same institution has one or more agents in Canada, and that this institution is the same "Philadelphia University of Medicine and Surgery." But we will again quote from the *Reporter*.

"The impertinence of the lecturers and students of a very pretentious institution in this city, which is "run" as an advertizing dodge by a number of very ordinary advertising doctors, in talking largely of their "University," its lectures, class and clinics, is, to say the least, very refreshing!

"It is said that the chief luminary of this concern, around whom revolve a number of lesser satellites, boasts that he carries the charters of several

medical colleges in his pocket, and that he claims to hold from the State Legislature the charter of an institution under the name of "The Philadelphia University of Medicine and Surgery." This being the case, we say unhesitatingly, that in thus chartering as a *University* a venture, which can lay no claim whatever to such a title, and especially so in granting it under a name by which it may easily be confounded with a venerable institution which possesses all the attributes of a University, and which has for a century been an honour to our city and State, it is evident that unscrupulous men have it in their power, if they choose to take advantage of the similarity of title to injure the name and fame of the original and true University, so long and so justly the pride of our city.

"Whether or not it was the intention, certain it is, that the effect of diligent advertising in the newspapers throughout the South and West during the past year, of this concern, which aspires to the dignity of a University, has been trying, we are informed, to inveigle some students into procuring its tickets, who supposed that they were entering our well known University, which has earned a character and reputation, with which, we respectfully submit, our Legislature had no right to trifle. Can it do less than revise its action?"

We are not aware that any Canadian student has been induced to take tickets at this so-called University, unless it may be those who seek medical knowledge through "Eclectic" channels. But of this we are well informed, that within the last few months strenuous efforts have been made to allure students in Canada, by sending a pretentious periodical called the "University Medical and Surgical Journal," to a large number of medical gentlemen in Canada. A special appeal is made to Canadians. The style adopted by the editor is one that might easily deceive the uninformed respecting the merits of "Dr." Paine. It is in consequence of this we have felt it our duty to place before the medical public the facts relative to the institution with which Dr. Lizars, lately of Toronto, and Dr. Ramsay, formerly of Orillia, have identified themselves. As before remarked, we would fain believe they had been deceived as to the real character of the "University." In connection with the university our *Medical Journal* mentioned there is also a "National Medical Association." We have it on the best authority that these three institutions are controlled by three or four irregular practitioners with, one Paine as their leader, a well known empiric, who have their head-quarters on 9th Street, Philadelphia, that the whole is a gross swindle, instead of a respectable college conducted by eighteen professors.

## THE MONTREAL GENERAL HOSPITAL.

We have to acknowledge the receipt of the forty-sixth annual Report of this valuable institution, which was presented at the annual meeting of the corporation, held on the 19th of May last. From it we learn that the receipts for the year were $16,908.80, and the expenditure $19,696.59, leaving a deficit on the last two years of $3742.09. The number of in-door patients treated in the wards during the year was 1417, being an excess of 79 over the preceding year. The number who received relief in the Dispensary department was 8419—an increase of 398 over the previous year. Ninety deaths occurred among the in-door patients, fifteen of them occurring within three days after admission. In looking over the diseases from which the patients have suffered, we notice that diarrhœa and typhoid fever have diminished one-half, compared with the preceeding year. Dysentery was, however, a common complaint. Small-pox was unduly prevalent during last winter, and fifty-seven cases of that disease were treated during the year, against twenty-one in the previous year. In a few instances the disease spread from the small-pox wards to the patients in the general wards.

With the view of meeting an important public want in this large city, the Board, at the last annual meeting of the Corporation, announced its intention of erecting a building for the reception of small-pox and other contagious diseases, so that the unfortunate victims of these maladies might obtain the care and attention the serious nature of their complaints required, while at the same time the citizens generally might be saved as much as possible from exposure to those dangerous diseases, the infectious fevers. The Fever Hospital is now completed, and contains two public wards capable of accommodating forty patients, and several private wards for persons whose means may enable them to pay for the convenience and comfort of good nursing and isolation from their friends, when suffering from contagious disease.

The report says :—"The cost of the erection of this building has been defrayed from the "permanent fund" of the Society, with the exception of the munificent sum of $5,000 contributed for the purpose by William Molson, Esq., and nothing but the urgent need of such a refuge for the sick would have induced the governors to have touched that fund; and they feel confident that when the citizens are called on for subscriptions to restore to that fund the money so expended—and they will be called upon during the summer—they shall not only subscribe enough to pay for the building, but do something towards creating an endowment for its yearly maintenance."

Several important improvements in the Hospital have been effected during the past year. The old operating room, which was very defective, has been rendered much more capacious and convenient by an entire alteration in the arrangement of the seats, by enlarging the sky-light, and introducing hot and cold water into the room. A complete system of pipes for heating the entire building by steam has been introduced into the Hospital, in connection with the apparatus just placed in the Fever Hospital, and it is supplied by the same furnace.

The medical staff continues the same as the previous year, except that Dr. Drake takes the place of Dr. Craik, the latter gentleman having resigned his appointment. Dr. George Ross was elected House Surgeon, and Dr. Roddick, of Harbor Grace, Newfoundland, received the appointment of Apothecary, or Assistant House Surgeon.

Since the above was in type, we are gratified to learn that, in answer to the appeal, the Committee have received the following magnificent subscriptions towards the endowment fund—John Redpath, $4,000; William Molson, $2,400, (in addition to the $5,000 previously given to the Fever Hospital); J. G. Mackenzie, $2,400; John Frothingham, $2,400; William Dow, $2,400; A. W. Ogilvie, M.P.P., $100; A. Crawford, Petite Côte, $100.

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## THE TORONTO GENERAL HOSPITAL.

This hospital, which had been closed for some ten months, was re-opened about the first of August, but owing to the fact that the trustees had the limited sum of $3000 with which to manage the charity until the next meeting of the Ontario Parliament, only the limited number of 25 free patients can be admitted. Additional inmates can find accommodation by paying 40 cts per diem. The trustees are no doubt acting wisely in confining the expenditure so as not to exceed their ability to pay; but as we have previously stated, we hope that this disgraceful condition of the Hospital will soon be removed, never to recur. We believe that no change or addition has been made in connection with the medical officers. We have no desire to find fault with the gentlemen at present constituting the staff; but we feel convinced that the principle we have before enunciated must eventually prevail, namely, to have an equal number from the two medical colleges of Toronto.

The *Medical Officers* are Dr. Wright, Aitkins, Richardson, Berryman, King, Rowell, Thorburn and Newcombe. *Consulting Surgeons and Physician*, Drs. Beaumont, Hodder, Bowell and Rolph.

The present number of patients in the hospital is 41. The House Surgeon is Dr. Hampton.

## THE RIFLE TOURNAMENT AT LAPRAIRIE.

The first annual meeting of the Dominion of Canada Rifle Association commenced on the Laprairie common, 9 miles from Montreal, on the 15th September. Although the attendance did not quite equal expectation, yet for several days the number of men under canvas did not fall far short of a thousand. Every portion of the Dominion was well represented. A large room in the officers' quarters was assigned for use as an hospital and was fairly furnished with sleeping acommodation, but was apparently destitute of everything else. Notwithstanding the cold wet weather, comparatively little sickness prevailed, and the admissions to hospital, were few, the only serious cases being an Ontario volunteeer who had a sharp attack of common continued fever, due evidently to exposure, and a trooper of the St. John's (Q) Cavalry, who suffered from a slight sunstroke. Diarrhœa was prevalent to some slight extent in the camp, but although they sought for medical aid, they invariably refused to enter hospital, being anxious to contend in the various matches. Dr. George Ross, Assistant-Surgeon of the "Royals," assumed the charge of the camp. A surgeon of volunteers, from Montreal, came over daily, remaining twenty-four hours on duty. During the whole time of the tournament, the weather was most unpropitious, being cold and rainy. The consequence was that many who originally intended staying until all the matches had been gone through with, left before they were half over. In future we would strongly urge the Association to choose a season of the year not so liable to rapid and severe changes as is the month of September.

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## VICTORIA UNIVERSITY.

The general introductory lecture for the session 1868-9, of this institution, at Toronto, was delivered by J. H. Sangster, A.M., M.D., Prof. of Chemistry, upon the evening of the 1st October. The audience, which was large, consisted of the students in medicine, and their friends, with a large number of the leading citizens of the city. The Dean of the Faculty, the Hon. Dr. Rolph, occupied the chair.

Respecting the lecture one of the Toronto Dailies says:—"Dr. Sangster's remarks were chiefly devoted to the duties, responsibilities and rewards attached to the practice of medicine; and the spirit in which the profession ought to be entered. The learned lecturer commenced by welcoming the new students and giving them a few words of sound advice on the labours before them and the duties incumbent upon them. He then entered on the chief topics of his discourse, referring first to the motives that lead to the study and practice of medicine, and after-

wards dwelling upon the duties and responsibilities of the profession. The lecture was an able and interesting one, and secured the attention of the audience from first to last. It was of special interest to the members of the profession. We regret that our space to-day will not admit of our giving even an outline of it. We can only say that it was one of the most interesting addresses ever delivered here, and reflected the highest possible credit on the learned lecturer."

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## MEETING OF THE MEDICAL ALUMNI ASSOCIATION OF VICTORIA COLLEGE.

The annual meeting of this Society was held in the County Council Chambers, Toronto, upon the 1st October, commencing at 3 o'clock. This Association, which has now existed nearly two years, held its annual meeting at the time of the commencement of the winter's course of lectures with the view of obtaining a re-union of the former students and their teachers. The society is under the patronage of the Medical Faculty, which body avail themeselves of the occasion to entertain the Alumni with a social supper.

The society continued in session two days, and was engaged with matters of professional importance ; certain charges had been preferred against several members of the body, of having been guilty of irregular practices, and some interest was felt by the Alumni respecting the course which should be pursued, regarding such individuals. The attendance was therefore very good.

The first day was occupied by the discharge of routine business, the delivery of a capital address by the President, Dr. Sangster, and by receiving the reports of committees. After adopting a constitution and by-laws, the Code of Ethics adopted by the Canadian Medical Association was accepted by the Alumni Association. Certain committees having been appointed for the transaction of immediate business to report the following day, the society adjourned.

The Association assembled at 9 o'clock, October 2nd.

The entire proceedings were conducted with the greatest harmony, and the important matters before the Association discussed with much calmness and deliberation. The various committees having reported, the election of officers was proceeded with, and resulted in the following gentlemen being selected for the ensuing year :—

PATRONS.—Rev. S. S. Nelles, D.D., President of University ; the Hon. J. Rolph, M.D., L.L.D., M.R.C.S., Dean of Faculty, Yorkville branch ; E. H. Trudel, M.D., Dean of Faculty, Montreal branch ; the Professors of the Faculties of Medicine, Law and Arts.

Officers—President: J. H. Sangster, M.A., M.D.; 1st Vice-President, Wm. Canniff, M.D., M.R.C.S., Eng.; 2nd do, P. Rottot, M.D.; 3rd do, Dr. Edmonson; 4th do, J. W. Rosebrugh, M.D.; Secretary, George J. Potts, M.D., Belleville; Treasurer, H. Strange, M.D., Hamilton.

Directors—John A. Mullin, M.D., Hamilton; S. L. Nash, M.D., Ameliasburgh; A. M. Rosebrugh, M.D., Toronto; Wm. Philp, M.D., Waterdown.

Delegates to the Canadian Medical Association—H. F. Tuck, M.D., and John A. Mullin, M.D.

Delegates to the New York Medical Association—L. Brock, M.D., and Henry Strange, M.D.

After the election of officers, the following gentlemen read papers on the subjects named:—Dr. A. M. Rosebrugh, of Toronto, on chloroform; Dr. George J. Potts, of Belleville, on diseases of the stomach, and in the absence of Dr. Willoughby, of Grafton, the president directed the secretary, Dr. Potts, to read Dr. Willoughby's paper on hysteria.

It was moved by Dr. Brock, and seconded by Dr. Potts,

"That the thanks of this association are tendered to Dr. Rosebrugh for his able and instructive paper upon the subject of chloroform."

Moved by Dr. Williams, seconded by Dr. Rosebrugh,

"That the thanks of this Association are due to Dr. Potts for the paper he has brought before us on diseases of the stomach."

Moved by Dr. McGregor, seconded by Dr. Williams,

"That committees on the following subjects be appointed to bring before the association at its next annual meeting succinct accounts of the present position of the following departments of the profession, viz: One on Medicine and Materia Medica; a second on general Surgery; a third on Midwifery and diseases of Women and Children; a fourth on Hygeine; a fifth on Vaccination, and a sixth on diseases of the Eye and Ear.

The above committees having been struck, it was

Moved by Dr. Buck, seconded by Dr. Williams,

"That inasmuch as pathology occupies such an important place in the advancement of medical and surgical knowledge, we, as the Medical Alumni of Victoria University, use our influence in forwarding this branch of study by sending and by encouraging others to send to the curator such specimens of morbid anatomy as are deemed worthy of a place in the museum of an *Alma Mater*."

Moved by Dr. Scott, seconded by Dr. Strange,

"That the thanks of this Association be tendered to the Grand Trunk, Great Western and Northern Railway Companies, for their courtesy in

granting return tickets at one fare to members of this association attending this meeting."

Moved by Dr. Rosebrugh, seconded by Dr. Buchanan,

"That the thanks of this association are due to the warden and the overseer of public property of the county of York for their courtesy in granting the use of the County Council chamber for our present meeting, and that the secretary be requested to communicate the same to the warden of the county of York."

The Association then resolved itself into a committee of the whole for the purpose of investigating charges brought against three members of the Association. One member was expelled for gross violation of the code of medical ethics, adopted by the Canadian Medical Association, and also adopted by this Association.

Moved by Dr. Williams, seconded by Dr. Barick,

"That the thanks of this Association are due to the retiring officers."

Moved by Dr. Strange seconded by Dr. Berryman,

"That in the opinion of this Association, it is in the interest of the general public that all persons who practice the art of medicine should have a certain amount of qualification, which can only be guaranteed by a definite curriculum in general education, and in those branches of professional education which are essential to the intelligent practice of medicine upon any theory, and this Association will cordially aid the Medical Council in obtaining such amendments to the present Medical Act as will enable them to make such regulations as the public can reasonably expect to operate as a guarantee of competency in all medical practitioners."

Moved by Dr. Strange, seconded by Dr. Potts,

"That Drs. Brock, R. McIntyre, J. A. Williams, A. M. Rosebrugh, and Ogle R. Buchanan, be a committee to draft resolutions to be presented at the next session at Cobourg, which shall embody the views of this Association on the several topics likely to be considered at the next meeting of the Canadian Medical Association."

Moved by Dr. Buchanan, seconded by Dr. Brock,

"That this Association do now adjourn to meet at Cobourg during the first week of May, 1869."

The adjournment was announced by Dr. Canniff, 1st Vice President, accordingly.

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## OUR DUTY TO THE LIVING AS WELL AS TO THE DEAD.

An effort has been made by a certain company to establish a cemetery in the western part of Toronto, within the coporation limits. It is to

be hoped for the sake of health to the inhabitants of Toronto, and because of the example which would be presented were such a thing done, that this body of speculators will not succeed in accomplishing their object .Of the many remarkable instances of ignorance with the Canadian public, respecting the laws of health and sanitary requirements, there is none more striking than the persistency with which many towns and cities continue to deposit human remains in close connection with the abodes of the living. Not unfrequently the very centre of towns are marked, by graveyards in which not only the dead of the place are buried, but in which are also collected many from the surrounding townships. Ignorance is the common cause of this indecent custom, and we call upon the profession to lose no opportunity of discharging a great public duty by protesting against the continuation of the habit. We trust that the health officers of Toronto will not fail to take such a step as will prevent so serious a violation of the rules of propriety.

Since writing the foregoing we observe that the question is being brought before the Toronto City Council. At a recent sitting Alderman Harrison introduced a by-law to prevent interments within the city. It would not interfere with cemeteries now in existence, but it would provide that the graves should be a certain depth, so as to prevent the odour and evil consequences arising from interments made less than five feet. The object was to prevent future purchases, not to interfere with existing interests. It would be very detrimental to the interests of the west end of the city to have, besides a Lunatic Asylum, another Necropolis. There was plenty of land outside the city that could be used for the purpose, and the interment of the dead should certainly be prohibited within the city limits. The by-law was read a first time.

This is well so far as it goes; but we must be permitted to say that the provision, intended to be made, to secure a certain depth of interment, may or may not be beneficial. So much depends upon the nature of the soil and its natural drainage, that it is impossible to define the exact depth in which the body should be placed. The truth of the matter is, these are questions involving no little scientific skill, and should be under the immediate direction of a competent health officer, appointed by Government, a part of whose duty it should be to inspect the places of burial throughout all the larger towns and cities.

We cannot close our remarks without according due credit to the *Daily Telegraph*, of Toronto, for its timely and earnest warning to the public of our " proposed western Golgotha."

## DEATH OF DR. PARKER, M.P., OF GUELPH, ONTARIO.

We record the death of this well known member of the profession in Canada, with great regret and sympathy for the bereaved family. He died at Guelph, on Saturday the 24th October, from the effects of injuries sustained by falling through a bridge upon the railway along which he was walking homeward at night after visiting a patient. The unfortunate gentleman lay all night unable to procure help, with a compound fracture of the femur, beside other and internal injuries. There was hope of his recovery at first, but too soon fatal symptoms presented themselves. Dr. Parker acquired his education in the arts department of Victoria College, and Jefferson Medical College, Philadelphia. He was known as a successful practitioner, and was the means of carrying through, if not the author, of the present Medical Act of the Province of Ontario. But Dr. Parker possessed even a wider reputation as a politician. At the time of his death he was the representative of Centre Wellington. As a public speaker he was not without considerable ability, and always commanded the utmost attention of the House of Parliament when speaking, by his well directed and often eloquent addresses. It was in reply to a speech from Dr. Parker, that McGee made his last memorable speech just before his assassination. Socially, Dr. Parker was highly esteemed for his genial and obliging manner. He leaves a widow and three children, to whom we extend respectfully our deepest sympathy.

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## DEATH OF DR. MACKENZIE.

Doctor MacKenzie, the well-known oculist, died at his residence in Glasgow, Scotland, in the early part of August, at the age of 74 years. At the time of his death he was Surgeon Oculist to the Queen in Scotland, and Lecturer on Diseases of the Eye in the Glasgow University. His sterling worth as a Surgeon will cause his name to live in the memory of the profession the world over. The Dublin *Medical Press* says, he stood firm in the experience which great practice and an intelligent judgment had taught him, and did not allow himself to be carried away by the overwhelming flood of ophthalmological quackery which has for many years almost swept practical Eye Surgery out of sight or recognition; one page of his clear well grounded information was worth volumes of the unsubstantial germanism lately current. When half the ophthamological disertations of the last ten years will have completed their mission in the Chandlers and Trunk Makers, MacKenzie's work will occupy the choicest corner in the library of the Oculist, and MacKenzie's name will be recollected as "a material guarantee" for what it contains.

## FOUGERAS' COD LIVER OIL.

This oil has been advertised in the *Journal* for about a year past, but until we had had some little experience in its administration, we declined to express any opinion concerning it merits. Having made use of it in several cases, it has impressed us as being of really great therapeutical value, being much more speedy in its action than the ordinary cod liver oil. It seems applicable to all cases where cod oil is demanded, but in our experience, it is of especial benefit in cases of spinal disease, and rickits. The formula, as given by Mr. Fougera, is that in addition to the natural amount of iodine, bromine and phosphorus, each quart contains: iodine, 16 grains; bromine, 2 grains; phosphorus, 2 grains. We notice that many of our exchanges speak favourably of this oil, and state that its employment is rapidly spreading throughout the United States. Mr. E. Muir, Montreal, is the agent for the Dominion of Canada, and can supply any quantity.

A really very excellent specimen of "Ready-Made Mustard Plaster," made by Mr. Fougeras, has been handed us by Mr. Muir, the agent in Montreal. Its great advantage, in addition to cleanliness, is the fact, that it may be depended upon as being all of a uniform strength. In cases where hurry is no particular object we recommend a trial of it.

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## THE DOMINION MEDICAL JOURNAL.

We have received the first number of this monthly, which presents a very creditable appearance. It is published by L. Brock, Esq., M.D., at Toronto. Price $2 per annum.

The Editor tells us, in his Introductory, that the absence of a Medical Journal in Upper Canada has been something of an opprobium to the profession. From this statement, and the article generally, we learn that the *Dominion Medical Joarnal*, notwithstanding the name, is intended for the special welfare of the Profession in the Province of Ontario. In this connection, we are pleased to say, that we believe the Medical Profession of Ontario is well able to support, and ought to sustain two medical journals; for, although the Editor of the *Dominion Monthly* is pleased to ignore the existence of the *Canada Medical Journal*, we, nevertheless, represent, and form the organ of a large number of the profession in the province of Ontario.

The tone of the Editorials is healthy, and gives promise of a dignified course respecting the main principles which appertain to the education and bearing of the members of our body. We notice particularly an

article on medical education, in which the writer advocates the appointment of a Central Medical Board of Examiners. We have not time to discuss this question now, but feel it our duty to remark, that the mass of the profession in Ontario is opposed to any such creation. There is no disposition to depart from the course pursued by the Mother Country, and degrade Universities by demanding that the graduates shall submit to a last examination before a Central Board.

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## MONTREAL CHEMISTS' ASSOCIATION.

We have received the first annual report of the Council of this Association from which we learn that it is in an exceedingly flourishing condition, there being one hundred members, and a balance of $125 on the right side of the ledger. This speaks well for the spirit and enterprise of our Montreal Chemists, and is deserving of very great praise. It demonstrates clearly that they have been united in their endeavors to establish the Association. If it was not so, such marked success could not possibly have resulted. In this matter they have taught the Medical Profession of Montreal a lesson, which we trust will not be lost. The officers of the Association for the ensuing year are, John Kerry, *President;* Benjamin Lyman and Nathan Mercer, *Vice-President;* W. H. Clare, *Treasurer;* Henry R. Gray, *Secretary;* Alexander Manson, Ebenezer Muir, James A. Harte, J. Baker Edwards, Ph. D., Kenneth Campbell, Thomas Crathern, T. D. Reed, *Council.* The report announces that the Council hope soon to be able to submit a draft of a Pharmacy bill to the Association.

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## TO OUR SUBSCRIBERS.

We are again somewhat late in the issue of our November number, and to be candid, we may as well state the cause. We did not care to go to press destitute of original communications, and none came to hand until about the first of the month. Are we to appeal to our subscribers in vain for contributions? We know there is no lack of the material, but we must say there is a sad want of energy. Instead of begging month after month for material our only trouble should be how to find room for it. Canadian physicians, set to work, and wipe off the stigma that will attach itself to you, if such a state of things continue.

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## TO CORRESPONDENTS.

DR. PHILLIP, *Plattsville, Ont.*—Did you receive our letter? If so the expected manuscript has not reached us.

ERRATUM.—In our report of the meeting of the Canadian Medical Association, in the October number, we stated that the Association adjourned to meet in Toronto on the first Wednesday in September, 1869. We should have said the second Wednesday. We trust that this important correction will be noted by our readers.

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## DECOLORATION OF IODINE.

Dr. Baruch, of Camden, S. C., in a recent number of the N. Y. Medical Record, says that both the hyposulphite and bisulphite of soda have the peculiar effect of depriving iodine of its color, forming a perfectly limpid fluid, which does not form the purple iodide of starch on the linen, nor produce the yellow discoloration of the skin. The small quantity of the hyposulphite required for this purpose, neither adds to, nor detracts from the therapeutic properties of the iodine.

A saturated solution of the soda in water is added to the tincture of iodine, in the proportion of about one-sixth. By agitation, a beautiful clear solution is formed with the properties mentioned.

If we desire, he says, to obtain the effect of the undiluted tincture, we need only dissolve in it a few crystals of the hyposulphite, or a little of the powder of the bisulphite, and complete decoloration will be the result. While the "carbolate of iodine" may be, and doubtless is a valuable antiseptic and stimulant, there may be, he suggests, some cases in which the carbolic acid might be contra-indicated, and in which the other preparation may prove a valuable remedy.

[The decoloration is both prompt and perfect by this process, but continued exposure to the light partially restores the color.—ED.]

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## OVARIOTOMY.

T. Spencer Wells, F.R.C.S., etc. (*Medico-Chirurgical Transactions*), has operated two hundred times. Of the first hundred cases he lost thirty-four; while the mortality in his second hundred has been reduced to twenty-eight. The most favorable ages for the operation are below twenty, and between forty and fifty. The mortality is about nine per cent. less among single women than the married.

Mr. Wells has found that the length of incision has an influence upon recovery, as the mortality has been 12 per cent. less when the incision has not exceeded six inches in length. He uniformly makes his incisions in the linea alba, and condemns the practice of making the incisions in the track of one of the recti muscles.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Case of Operation for Chronic Hydrocele with Densely Hypertrophied Walls, complicated with Hernia: tying the Sac of the latter close to the Ring—Radical Cure.* By JOHN REDDY, M.D., L.R.C.S.I., &c., Physician to the Montreal General Hospital, &c.

There are a few points in the following case which are not devoid of practical interest, illustrating the difficulties that are occasionally met with by the operator. We have here a large, dense, smooth, and firm tumour, unyielding to the touch, presenting no evidence of fluctuation —its history, however, permitting of no doubt as to its original nature. Coupled with this a large double hernia exists, both easy of reduction, that on the left projecting as far, but giving no positive evidence of its entering into the tumour. The operation at first sight seemed simple and easy of execution, but on making the first incision it gave one the idea that the knife was passing through a tough and rather dense cartilaginous structure, which as I proceeded, I found to be more than three quarters of an inch in thickness—all alike in character. Having used the precaution of dissecting from below upwards, I found that about the centre of the tumour my knife had passed into a small cavity, which I soon ascertained to be about an inch in length, of the terminal sac of the hernia, small in diameter and firmly united to the general mass, leaving no alternative in the removing of the tumour but cutting it straight across. It is unnecessary for me to refer further to the steps of the operation, as they have been already detailed in the notes furnished by my dresser, Mr. Perrier. I am not, however, aware of a similar case being on record where a hernial sac has been tied quite close to the ring, and what is well worthy of note, without a single bad symptom arising. I wish further to add that my patient derived great benefit from the occasional use of carbolic acid and oil (1 to 5) in promoting healthy action and rapid cure. I have had an opportunity of examining Durney with

in a few days past, and have to report that the case has turned out most satisfactorily, a perfect cure resulting, 15 months having elapsed since the operation.

Richard Durney, a labourer, aged 56, was admitted into the Montreal General Hospital on the 19th July, 1867. On examination it was found that the left side of the scrotum was enormously distended, but firm and hard, giving no fluctuation or other sign of the presence of fluid. The tumour measured 20 inches in its long diameter, and 5 in its transverse.

The account he gives of the growth of the enlargement is the following:—About 8 years ago he strained himself and became ruptured on the left side. Four years subsequently he perceived that the side of the scrotum was becoming gradually distended; after a period of two years the tension became so great that he sought relief at the hands of a surgeon. The fluid was removed at once, and the operation repeated three times, at intervals of two months. He now permitted six months to pass without having the dropsy tapped; at this time he perceived that the tumour became apparently firmer and harder, and he experienced considerable pain in the part; finally it burst and discharged about a pint and a half of thick pus. On one occasion, a short time after, there was considerable hæmorrhage from the same opening.

It was resolved to remove the whole of the diseased parts, as this was considered the only method by which a perfect cure could be effected, Tapping and injection would of course have been of no avail, as the parts were so entirely altered by the previous suppuration, that no adhesive inflammation could be looked for in them; accordingly on the 28th July the operation was performed by Dr. Reddy in the following way. A longitudinal incision, of about 6 inches in length, was made through the integument and immediately underlying tissue. This was then reflected back on both sides, considerable difficulty being experienced in this step by the dense and unyielding nature of the areolar tissue and dartos of the scrotum, which were completely solidified by previous inflammation. The next step was to make a transverse incision with a view to separation of the parts. The protruding bowel was carefully held up by an assistant, and the incision made below the point where it was thought the hernial sac terminated, but, unfortunately, it turned out that the lower end of the sac was severed; the tunica vaginalis extremely thickened ,and the testicle was dissected out and removed. The Doctor then proceeded to secure the portion of intestine in its place; this was done by bringing the cut lips of the sac together, transfixing in the centre with a double threaded needle and tying firmly on both sides. A

strong ligature was then cast around the whole. The cavity was sponged with a solution of carbolic acid and oil, and stuffed with strips of lint soaked in the same.

The wound progressed very favourably from the first, healing nicely by granulation under the influence of daily injections of carbolic acid and oil and a solution of permanganate of potash, which latter was occasionally used.

By the 12th August he was nearly well, much improved in feeling since the removal of this cumbrous weight. The hemp ligature round the neck of the sac still remains. 8th Oct., the ligature came away. The wound is entirely healed, except along the traget of the latter, and the hernia is radically cured.

The specimen, which has been carefully put up by Dr. Ross, House Surgeon Montreal General Hospital, is now in the museum of McGill University; it presents above, the smooth hollow platform which formed the floor of the hernial sac; and below, the tunica vaginalis, thickened in some parts to the extent of more than three quarters of an inch. The cavity of the tunica is small, and at its posterior part is seen the small shrunken testicle, the tubules of which are all completely disorganized.

877 St. Catherine St., Phillips' Square, November, 1868.

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*An Essay on the Contagion, Infection, Portability, and Communicability of the Asiatic Cholera in its relations to Quarantine; with a brief History of its Origin and Course in Canada, from* 1832. By W. MARSDEN, A.M., M.D., ex-President and Governor of the College of Physicians and Surgeons, Canada East; Honorary Fellow Medico-Botanical Society, London; Corresponding Fellow Medical Society, London; Honorary Fellow Montreal Pathological Society; Honorary Fellow Berkshire Medical Institute and Lyceum Natural History; Honorary Fellow Medico-Chirurgical Society, New York; Honorary Member of the American Medical Association, &c., &c., &c.

*(Continued from our last.)*

I think enough has already been said to justify the assumption of a contagious property to Asiatic Cholera; but before leaving the subject, I will adduce two general facts which strongly support this opinion. The first is connected with the local progress of the disease, as when it begins in a camp or a town. There, its first appearance is announced in the attack of one or of a few individuals, and the number of the cases *gradually* increases. This course cholera has universally pursued. Now,

had the cause of the disease been generally diffused in the atmosphere of the camp and town, would not great numbers of the people have been attacked, almost immediately, on the occurrence of the first case?

The second general fact is the following:—Among the islands of the Indian Ocean, it was observed that the cholera uniformly commenced its ravages in the seaport towns, or in those towns seated a few miles inland, which have a constant intercourse with their harbours at the shore. In the island of Mauritius, the disease first appeared in the town of Port Louis. In Bourbon, the town of St. Denis was first attacked; in Java, the town of Samarang, and so of the islands Sumatra, Penang, Borneo, Celebes, Lucon, &c. In the Persian Gulf, also, the same order of infection was observed. Muscat, the principal trading port town, first received the disease. Then, the port of Bahrein, and Busheer and Bassara.

The same order was observed on this continent. First the port of Quebec was attacked, then New York, New Orleans, Halifax, Boston, &c. How can this extraordinary and uniform partiality which the cholera exhibited in its choice of seaport towns for its first inroad be explained, unless on the principle of contagion?

QUARANTINE is a subject that occupies a larger space in the pages of medical history at this time, than it has done hitherto. The interests of a commercial country, says Kennedy, require that vessels should enter and depart from its harbours without let or impediment—for the interposition of a very slight delay may completely alter the character of a mercantile speculation, and the interval of a single week may convert a valuable article of import into an unmarketable drug. In such a country, therefore, no regulations restrictive of the freedom of maritime enterprise should be adopted *without the strongest plea of necessity, and the best-founded assurance that they are likely to prove adequate to the accomplishment of their object.* If injudiciously framed, or imperfectly executed, they merely serve to aggravate the evil they were intended to prevent. These observations are peculiarly applicable to quarantine laws, the operation of which is not only detrimental to property, but productive of very serious annoyance to individuals, by the sacrifice they are obliged to make of their personal liberty to the general safety.

The progress of the Eastern Pestilence, and the evidence of its contagious character, leave no doubt of the propriety of submitting to many inconveniences for the purpose of staying its approaches to our shores. No rational means should be left untried to bar the introduction of so terrible a scourge—and as the magnitude of our dealings with foreign countries tends at once to augment the peril from the disease, and the

pecuniary loss incidental to the adoption of sanitary precautions, it is manifestly unwise to have recourse to these precautions at all, *unless they are based upon sound principles, and scrupulously carried into effect.*

The efficiency of quarantine regulations, as I have always remarked, will depend upon their being adapted to the nature and laws of the agent they are intended to exclude. If the lurking poison long retain its power under circumstances unfavourable to its development, then must the term allotted to the purifying and disinfecting process be proportionally protracted. For persons in apparent health, the quarantine must always exceed the longest possible period of latent infection.

The following extracts are condensed from the "Report of the International Sanitary Conference relative to the origin, endemicity, transmissibility and propagation of Cholera," adopted on the 21st of May, 1866, at Constantinople, and form an appropriate sequel and summary to this paper, endorsing as it does in every essential particular the conclusions at which I arrived and promulgated years ago.

1stly.—On the *Origin of Asiatic Cholera.*

*a*,—That Asiatic Cholera had its origin in India, where it exists permanently as an epidemic.

*b*,—That *out of India Asiatic Cholera never spontaneously developes itself.*

*c*,—That there is little probability that Cholera may acclimate itself out of India.

*d*,—That Asiatic Cholera does not appear to have its original focus in the Hedjaz, but has been introduced there from abroad.

*e*,—That Asiatic Cholera is endemic in some parts of India.

*f*,—That the special conditions under the influence of which Asiatic Cholera breaks out in India, and reigns in certain localities as an epidemic, are not known.

*g*,—That pilgrimages are in India the most powerful of all the causes which tend to develope cholera epidemics.

2ndly.—On the *Transmissibility and Portability of Asiatic Cholera*, it says:

*a*,—*That Asiatic Cholera is propagated by man with a rapidity proportioned to his movements*, and that *its transmissibility is an incontestable verity.*

*b*,—That *Asiatic Cholera cannot propagate itself at a distance by the atmosphere alone*, whatever may be its condition, and besides *it is a law without exception that never has an epidemic of cholera extended from one point to another in a shorter time than was necessary for man to carry it.*

*c*,—That *all means of conveyance from countries affected with Asiatic Cholera ought to be suspected.*

*d*,—That a man affected with Asiatic Cholera is himself the principal propagating agent, and a single cholera patient may cause the development of an epidemic.

*e*,—That *a single individual* (with the more reason many individuals) *coming from a contaminated place, and suffering from diarrhœa, is able to cause the development of a cholera epidemic;* or in other words, that *the diarrhœa called premonitory is able to transmit cholera.*

*f*,—That *the period of incubation of Asiatic Cholera does not extend beyond a few days.*

*g*,—That there is no proof that cholera has been imported by living animals.

*h*,—That *Asiatic Cholera can be transmitted by articles in common use coming from an infected place, and especially by those which have been used by cholera patients, and the disease may be transported to a distance by these same articles when closely shut up from the outer air.*

*i*,—That there is no proof that Asiatic Cholera can be transmitted by merchandize. But the commission thinks it wise to consider as suspected, under particular and determined conditions, everything coming from a cholera district.

*j*,—That although it is not proved that the bodies of patients dying of Asiatic Cholera can transmit the disease, it is prudent to consider them as dangerous.

3rdly,—On the *influence of means of communication*, the commission states:

*a*,—That *maritime communications are by their nature the most dangerous; and next to them. comes communication by railroad, which in a very short time may carry the disease to a very great distance.*

*b*,—That great deserts are most effectual barriers to the propagation of Asiatic Cholera.

4thly,—On the *influence of crowding*, it says:

*a*,—That *all crowding together of human beings among whom Asiatic Cholera has been introduced is a favourable condition for the rapid spread of the disease.*

*b*,—That the intensity of Asiatic Cholera on board of ships, crowded with men, is in general proportionate to the crowding, and is so much the more violent, other things being equal, if the passengers have not resided in the focus of cholera whence they started; that

on crowded ships the spread of cholera epidemics is ordinarily rapid; that the danger of importation by ships and giving rise to a grave epidemic, are not entirely subordinate to intensity, not even to the existence of choleraic symptoms during the voyage.

*c*,—That the crowding together of persons from a place where Asiatic Cholera exists, has not the effect of producing among the people at quarantine a great extension of the disease; but such a gathering is dangerous to the neigbourhood, and calculated to favour the propagation of cholera.

*d*,—That great gatherings of men (armies, fairs, pilgrimages) are one of the most certain means for the propagation of cholera; that they constitute the great epidemic foci, which, whether they march after the manner of an army, or whether they are scattered, as at fairs and in pilgrimages, import the disease into the country which they traverse.

*e*,—That the breaking up of a collection of people, at an opportune time, may render an epidemic of cholera less violent or even arrest its extension; but this scattering, on the other hand, gives rise to great danger of propagating it, if it take place in the midst of a region as yet unaffected by cholera.

*f*,—That the pilgrimage to Mecca, has twice introduced Asiatic Cholera into Egypt with an interval of thirty-four years, during the hot season.

5thly.—On the *Influence of Hygienic Conditions*, it concludes:

*a*,—That the Hygienic and other conditions which predispose a population to contract Asiatic Cholera, and favour the intensity of epidemics, are misery, overcrowding, the hot season, want of fresh air, exhalations from a porous soil impregnated with organic matters, above all with the dejections from cholera patients. In addition:

*b*,—That the *cholera discharges contain the generative principle of Asiatic Cholera*, and drains, privies and the contaminated waters of towns may become the agents for the propagation of the disease.

*c*,—That *the soil of a locality, once impregnated with cholera detritus, may retain for a considerable time the property of disengaging the principle of the disease, and thus keep up an epidemic, or even regenerate it after it has become extinct.*

6thly.—On the *Immunity from Cholera*, the commission is of opinion:

*a*,—That the immunity of certain localities, and persons in the midst of an infected district, does not exclude transmissibility.

7thly.—The deductions relative to *the generative principle of Asiatic Cholera*, by the commission are:

*a*,—That it *originates* in certain countries in India, and that it dwells there permanently; that this principle is reproduced in man, and accompanies him in his journeyings; that it may also be propagated at a distance from place to place by successive regenerations, without ever being reproduced spontaneously outside of man.

*b*,—That the air is the principal vehicle of the generative agent of cholera.—*The action of the cholera miasm is so much the more sure as it operates in a confined atmosphere and near the focus of emission. That cholera miasm, like typhus, rapidly loses its power in the open air at a short distance from its starting point.*

*c*,—That *the transmission of Asiatic Cholera by the atmosphere is limited in most cases to a space very near the focus of emission. That transportation by the atmosphere to a distance of one or more miles is not established.*

*d*,—That *water and certain ingesta may also serve as vehicles for the introduction into the organism of the generative principle of Asiatic Cholera. That it penetrates into the economy by the respiratory passages, and very probably also by the digestive canals. Nothing tends to prove its penetration by the skin.*

*e*,—That *everything that is contaminated by cholera discharges also becomes a receptacle from which the generative principle of cholera may be disengaged*, under the influence of favourable conditions.

*f*,—That *in the open air the generative principle of Asiatic Cholera rapidly loses its morbific activity, and that this is the rule.*

Finally the commission adopts the following formula:

Observation shows that the duration of the choleraic diarrhæa called premonitory, which must not be confounded with all the diarrhœas which exist during the time of cholera, *does not extend beyond a few days.*

Facts cited as exceptional do not prove that the cases of diarrhœa prolonged beyond that period, belong to cholera, and are susceptible of transmitting the disease, when the individual affected has been withdrawn from all cause of contamination.

On the subject of prevention the conference says: "It seems to us that in the case of ships arriving from infected neighbouring ports, the following measures might advantageously be adopted:

1st. No person should be allowed to land previous to efficient inspection by medical men appointed for the duty.

2nd. The healthy passengers should be removed from the ship, and *isolated for a period, which need not exceed five days*, at the end of which time they should again be inspected, and if found without choleraic symptoms, should receive "pratique."

3rd. All persons with cholera or diarrhœa, at the time of arrival, or at any period of detention, should be *isolated from the rest and removed to a separate place.* Cases of diarrhœa should be detained under observation until the diarrhœa is cured, or until the medical officer in charge is satisfied from the features of the disease, that it is not of a choleraic nature.

We think that the *time of observation in such cases of diarrhœa should not be less than eight days* from the commencement of the seclusion. The above measures would require the following conditions at each quarantine station:

1st. *An establishment for the reception of the healthy,* capable of *completely isolating successive parties of arrivals in distinct classes, well separated from each other.*

2nd. *An establishment for the reception of the sick, with an isolated convalescent establishment.*

Each of the above should be provided with latrines, having moveable receptacles, which should be daily emptied and purified.

3rd. An establishment for the purification of effects.

The establishments would certainly be large, but a small number of them placed on a few points of the coast would suffice, if all ships carrying passengers from infected ports were made to pass through them before receiving "pratique."

There are one or two conclusions in the foregoing report from which I dissent, and for which no fact within my knowledge and experience forms a basis, but, as they err (if they err at all) on the side of safety, they have my hearty approval.

I trust I shall not be charged with egotism if I call attention to the extraordinary resemblance that my plan of quarantine for cholera, bears to that since suggested by the Cholera Conference. This I merely mention to show the identity of the facts from which we have both made our deductions, and by which both have arrived at the same conclusions.

By my plan, four days is the period I have fixed for the isolation of the healthy before admitting them to pratique, and the Constantinople Commission says: "It need not exceed five days." The other details and mine are identical.

I am more than ever impressed with the conviction of the soundness of the principles on which my plan is based, and satisfied that whatever plan of quarantine for Asiatic Cholera may be ultimately adopted *on this continent,* UNIFORMITY IS ESSENTIAL TO EFFICIENCY. It can be of little use that any province or state should adopt a rigorous and absolute quarantine at its seaports, if a neighbouring state or country, through diversity of laws

or opinions, adopts another and perchance looser system. How would the safety of your house be affected against intruders, if you were to bar the front entrance, and leave the back door open? Precisely so would it be with a partial or sectional system of quarantine; and the horrors of the past would be re-enacted in all their intensity, by such a system. Any port on this continent might again become the door of entrance to this dreaded scourge, which crept up the St. Lawrence by the gate of Quebec in 1832, carrying death and dismay through almost every section of British America and the United States.

Finally: From a special study of the history of this disease, extending over a period of thirty-five years, and an extensive practice and careful observation and investigation of facts during six distinct visitations of the scourge, I have arrived at the following conclusions: That fearful and fatal as the pestilence frequently is, it is a most manageable and controllable disease if properly handled; and, when its germ has been thoroughly exterminated—"stamped out"—*the uniform application of scientific preventive and hygienic measures will render Asiatic Cholera an unknown disease to future generations on this continent.*

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## LONDON CORRESPONDENCE.

In our last letter published in your October number, by a typographical error, the Dean of Cork is called the Dean of Carne, which we now rectify, because, since our letter was sent, he has been made Bishop of Peterborough, an elevation which he has well deserved from his great literary acquirements.

We have a few words to say of the doings of the International Congress of Prehistoric Archaeology and Anthropology, which recently met at Norwich. This great body meets annually in some one of the European cities; last year it met at Paris, this year at Norwich, and next year it will meet at Copenhagen.

The communications before it have a great deal to do concerning man and his works in prehistoric times, and the variety in the subjects selected for discussion is quite curious and always interesting. Caverns and their contents, sculptured rocks of ancient times, antiquities of the South Sea Islands, ancient modes of sepulture, flint implements, distribution of the ancient races of mankind, antiquity of iron works, and animals associated with prehistoric man, will furnish a good idea of the work done by the congress. Into none of these will we attempt to enter, unless

one, a paper by Professor Huxley upon the *Distribution of the Races of Mankind*, as bearing upon their antiquity. Supposing, he said, that all the various forms of mankind were gathered together in one place, and supposing we had in the first place to pick out all the great groups, he thought we would reduce them to four. There is that form of mankind which he should call "Australoid," because he believed the best type of this form of mankind is to be found in Australia at the present day. It consists of a dark complexion of various shades of chocolate, black eyes, wavy and silken hair, and a long skull. The *second* type is the "Negroid," men with dark skins varying from dark brown to what we call black—though true black was a great rarity, with invariably black eyes; dark hair, usually black and also crisp, or what we call woolly. The skull is also a long one, though different in many respects from the Australoid. The *third* group is the "Mongoloid," with a complexion varying from a yellowish down to an olive tint; with black eyes, and black hair, which is usually straight and lanky. This group differs from the other two in the character of the skull, but the characters of complexion, skin, and hair, are more permanent and of more value than those of the skull. The *fourth* type is one extremely common amongst ourselves, especially in the eastern and southern counties of England, and also in Germany and the Sclavonic countries. It is what is known as the "Blonde" type, but sometime ago he proposed the name of "Zanthochroid." These people have fair delicate skins, through which the blood shows, imparting that colour which we admire so much; yellow hair, and blue eyes, and they are usually of tall stature. In this group as in the other, there is an extreme variation in the type of the skull; that is to say there may be every variety, from the long skull of the Scandinavian to the broad skull of Central Germany.

This Professor Huxley considered a convenient classification of the various groups of mankind. The geographical distribution is an extremely remarkable one. First of the *Australoid* type. The great continent of Australia is the headquarters of this type; it is not met with in Van Diemen's Land, but is in the hill tribes of the Deccan in Hindostan; also in Abyssinia and the valley of Egypt. The *Mongoloid* division is found in Central Asia, where the Kalmucs and Tartars represent the purest form of these people. They are traced westwards to Lapland, and along the whole of the Polar regions to the Eskimo. They are traced southward throughout the breadth of the two Americas to Fuego; and are the most widely distributed of any divisions of mankind. A modification of the same type is found in all the islands of the Pacific which stretch from Van Diemen's to New Guinea, and all those which lie

outside the Sandwich Islands and New Zealand. The *Negroid* type has a most remarkable distribution. All Africa south of the equator has been peopled by negroes; they are found in Madagascar and the Peninsula of Malacca; a trace in the Philippines; and entirely in New Guinea. New Caledonia is also entirely peopled by them; and lastly is Tasmania, where the people are totally different from the Australians.

The fourth or *Zanthochroid* type is to be found now all the way from the British Islands, through Scandinavia, through Central Europe, to the frontiers of China, where the people of this type are described by the Chinese historians as people having blue eyes and big noses, like the apes who were their forefathers, which Professor Huxley said was rather amusing, when we bear in mind that the Chinese have squinting eyes and scarcely any noses to speak of. This people are found at greater or less intervals throughout the whole of this area, and are traceable to the present day to Syria.

This must suffice to give a general idea of the new classification, for the consideration of the emigration of these various groups, in itself very interesting would take up more space than we could devote to it in this short letter.

When the meetings of the congress terminated at Norwich they were resumed in London for 3 or 4 days, and concluded with a Conversazione at which we were present, in the rooms at Westminster where the celebrated Ethnological collection of the late Mr. Christie is preserved, Mr. Franks of the British Museum being the host.

In this magnificent collection, we were much impressed with the casts of various objects discovered in the assiferous breccia in the caverns of Perigord at Derdonnes in France, by Mr. Christie, the originals of which remain in France. Among these casts were two of a fragment of mammoth tusk, with the representation of a mammoth scratched, or engraved upon it, if it may be so expressed. What better proof can be desired of, the co-existence of man with these creatures, whose existence takes us back a period of time, as stated in one of our former letters, some 30 or 40 thousand years.

Although the meetings of the medical and other societies have commenced for the winter, we cannot as yet say whether it will be a busy session or not, for everything appears unsettled and unquiet by the prospect of the forthcoming elections, in which several medical men are expected to be returned to parliament.

Last night we were one of the invited at the magnificent banquet given by the master and wardens of the Apothecaries Company, in their fine old hall at Blackfriars. The company was close upon 200, and were enter-

tained in such a manner for which the various city companies are famed. This was the annual banquet after Lord Mayor's day. At the head of the old oak wainscoted hall, were full length original portraits of James I. and Charles I., both sovereigns in their day being patrons of the Apothecaries Guild. The master is Mr. ——, and entertained his visitors right royally. Notwithstanding the numerous licensing bodies here, the Apothecaries Society maintains its way, and a large number of gentlemen annually take the licenses. If Canadian graduates, whose degrees are not yet recognized here by the medical act, but will be shortly, are desirous of practising in England, for a moderate fee and an easy examination for them, they can obtain this license, and will be immediately on a par with the most favoured in the land.

London, November 12th, 1868.

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## REVIEWS AND NOTICES OF BOOKS.

*Conservative Surgery in cases of Severe Traumatic Injuries of the Limbs, with a Report of Cases.* By ALBERT G. WALTER, M.D.

It is always a pleasure to read a work, the writer of which has something definite to say, and who knows how to say it. That Dr. Walter has clear and well considered views, no one who reads his work can doubt. The question of antiseptic surgery is, at the present time, commanding no little attention in the surgical world. The treatment of severe traumatic injuries is receiving attention simultaneously from the first surgeons in Europe and America. The frequent occurrence of Pyæmia and death after such injuries, and amputations, has led to the consideration of the subject, with the view of ascertaining if these fatal terminations cannot be averted. Two opinions seem to prevail as to the cause of the evil. One is, that the presence of common air, in which it is believed minute organism dwells, leads to the decomposition of organic liquids and solids. The other view is, that death, and decomposition of the material, result from the injury by which crushing of the tissues had been produced. Among those who hold the former view may be mentioned as the principal one, Prof. Lister of Glasgow, and also M. Jules Guérin of Paris. Among the latter is M. Maisonneuve of Paris. Prof. Lister's method of practice is to apply carbolic acid to the lacerated and bruised wound, with the view of destroying the germs which had been deposited from the air, and which it is supposed will produce degeneration and death. When in Paris in the summer of 1867, we had the opportunity of witnessing

the mode adopted by M. Maisonneuve, which consists of a bag and tube applied to the part in which decomposing fluids are pent up, and then by suction, to remove the noxious material. He never thinks of excluding the air. At that time this eminent surgeon spoke strongly in favour of this plan of treatment. He has more recently stated that continued success attends this treatment. But in the meantime, while these European surgeons have been seeking a more successful method of treating the more severe forms of local injuries attended with wounds, the surgeons of the New World have been neither idle nor thoughtless. As a result of study and careful examination, with extensive experience, we have this valuable monograph by Dr. Walter. We feel a disposition, did space permit, to quote at length from the work; we must, however, satisfy ourselves with pointing out what seems to be the principal feature of these instructive pages. Dr. Walter discards, we think, with great justice, the germ theory and treatment based thereon by Prof. Lister. The air may be poisoned by noxious elements floating therein; but pure, unadulterated air is not only not poisonous to a wound, but salutary. And when any poison does exist in the air it proves injurious by entering the lungs, not by coming in contact with wounded tissue. The danger attending severe crushing wounds consists in the presence of lifeless organic material in the wound and adjacent tissue. This may be abundant, and if pent up, either by artificial closing of the wound, as by sutures, bandages or otherwise, or in the interstices of the bruised tissue, perhaps beneath dense fascia, then there is danger of absorption taking place, and blood-poisoning resulting. This view thoroughly accords with our own. Such being Dr. Walter's belief, he recommends strongly that lacerated and contused wounds should not be hastily closed. If there be decomposing fluids pent up, the author advises the use of the knife, making incisions sufficiently free and numerous to provide a free way of escape for the confined fluids. Then, by attention to cleanliness, by securing a free access of pure, invigorating air, he secures to the patient a far greater chance of recovering. It is perhaps in the making of these incisions that Dr. Walter is particularly original. He deserves great credit for original thought in other respects; but others were studying the same problem and had arrived at conclusions similar to his own in many respects. Maisonneuve recognized the evil of allowing these pent up fluids to remain in connection with wounds, and devised the plan of abstracting them by suction. Dr. Walter takes a more speedy and convenient way, and secures effectual draining by making these free incisions. We would here remark that we have obtained the same results by leaving open the wound, attending to the position of the injured limb,

and by judiciously and well directed pressure externally, so as to squeeze out the fluid, as one would out of a sponge; attention being given to cleanliness and circulation of pure air. We would strongly advise every one interested in the science and art of surgery, and who wishes to acquire valuable information, to procure this treatise. It can no doubt be procured by any bookseller.

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## PERISCOPIC DEPARTMENT.

### Surgery.

#### CLINICAL LECTURE ON SIMPLE FRACTURE OF THE FEMUR.

By JOHN ERICHSEN, F.R.C.S., as published in two numbers of the *London Lancet*. Analysis by PROF. JAMES M. HOLLOWAY, M.D., Louisville, Kenty.

Fracture of femur common. Not so important, because of severity, as from length of confinement and danger of shortening. Dissection of a few cases, shortly after death from other causes, shows: (*a*) upper fragment always tilted *upwards* (recumbent posture,) forwards (erect posture,) and either *inverted* or *everted*. (*b*) Lower fragment always drawn *upwards* (in direction of long axis of limb) and rotated outwards. *Muscles concerned in displacement. Upper fragment*—psoas-iliac, adductors; these, when cut across, caused *depression*: Obturator internus and gemelli; these, when cut across, corrected *inversion*. In another case *eversion* was corrected by severing external rotators, especially the obturator externus. *Lower fragment*; flexors of leg, adductor magnus and part of ad. longus, vastus externus and internus, when cut across, in the order named, gradually corrected *shortening and rotation outwards*. In these cases, the muscles causing displacement of fragments continued to manifest *rigidity* after death. "*The muscles that were uncontracted at the time of death were not contracted after the rigour mortis had passed. The others continued contracted, as they had been during life.*

[By this paragraph the author evidently means that muscles causing displacement of the fragments of a broken bone, if not protected by proper treatment, have their characteristic function permanently destroyed, ceasing, physiologically, to be muscles.—J. M. H.]

*Treatment.*—By three methods, combined or uncombined: (*a*) Liston's long splint; (*b*) starch bandage; (*c*) extension by weights. All three methods act upon the same principle, viz.: gradual exhaustion

of muscular contraction and consequent replacement of fragments in normal position. In very muscular adults, Liston's splint should be applied for a week or ten days, the counter extending band being tightened every other day. After that, substitute starch bandage and allow patient to go about on crutches. Some degree of care is required in the proper application of the starch bandage. Envelop limb with cotton batting, then apply pasteboard splints, wetted and starched, on different aspects of limb and mould them thereto by successive layers of roller bandage, thickly starched.

*Precaution.*—Fix immovably the knee and hip joints with the splints and avoid *bulky dressings* below the knee; let them be just sufficient to prevent swelling of limb and retain splints *in situ*; otherwise their weight, acting upon so long a lever, might alter direction of long axis of limb. The starch bandage causes fatigue and relaxation of muscles by circular pressure and the cotton batting increases friction between skin and dressings, thereby preventing motion. The extension by weights as described by Dr. Buck, of New York, is applicable: (*a* To cases which cannot endure confinement required for Liston's splint; (*b*) where starch bandage is difficult to apply and insufficient to overcome muscular contraction in short, thick-set adults; and (*c*) when chronic ulcers or recent wounds coexist with the fracture. In such cases, extension should be made by weights from eight to fifteen pounds, attached by a cord to adhesive straps, which are applied along inner and outer aspects of leg and joined below plantar surface of foot; the cord plays upon roller fixed on top of upright at food of bed; counter-extension is maintained by elastic perineal band, covered with domestic or flannel, attached to head of bed.

An objection to the employment of Liston's splint, urged by some, is the tendency to obliterate the natural curve of femur by making extension in the direction of the long axis of the straight splint and not of the bone involved. This, however, is a theoretical, rather than a practical objection. Any tendency to the result alleged, while the limb is supported by the splint, is compensated for by the subsequent *moulding and moulting* of the newly formed, yielding callus. This callus is sufficiently firm at the end of the eight weeks to preserve the integrity of the bone; but does not prevent the action of the muscles in restoring its normal shape. It is always important to prevent shortening, and the three methods recommended will, in most cases of simple fracture, attain the desired object. But, even when there is unavoidable shortening, in very oblique fractures of a half inch or more, the subsequent accommodation of the pelvis to such a condition will prevent limping.

For children, the starch bandage is alone sufficient, because of feebleness of muscular contraction. They should be allowed to go about on crutches after the third or fourth day, or as soon as the bandage is perfectly dry. Preference is given to starch over plaster of paris, glue, egg and flour paste, silicate of potassa, dextrine, and "other things."

NOTE.—In such cases I have found it a good plan to reduce the fracture as nearly as possible by forcible extension (with or without chloroform) and apply, without delay, the starch bandage. Until the dressing becomes perfectly dry, use Dr. Buck's method to prevent contraction. Afterward, the latter may be removed and the adult patient should be directed to move about carefully upon crutches every day, in order that the evils of close confinement may be avoided. The weight of the lower fragment, the patient being erect, affords sufficient extension to gradually overcome the remaining muscular contraction. When the starch bandage loosens, from subsidence of swelling and relaxation of muscles, it should be split open in the direction of long axis of limb, and the edges being pared or lapped, a stout roller should be applied to fix it. Fenestra can be made over the ulcers or wounds, so that they may be examined at will. My experience, however, induces the belief that these ulcers or wounds heal more rapidly when covered with a starch bandage, than otherwise; not *solely*, because of the exclusion of atmospheric air, but rather, because of the absolute rest and protection against sources of irritation thereby obtained.—*Richmond and Louisville Med. Jour.*

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## EPISTAXIS—PLUGGING THE NOSE—ILLUSTRATED BY FOUR CASES

Under the Care of Mr. CROLY.

*Case* 1.—E. S., a female, aged 49 years, was admitted into the City of Dublin Hospital, with bleeding from the right nostril, which had continued for several days. The ordinary remedies had been at first adopted by her medical attendant, who, as a last resource, plugged the anterior and posterior nostril. The hæmorrhage was thus checked for a short time, but having recurred, she was sent to the hospital. On her admission, it was found that the blood flowed down her throat, and escaped anteriorly. The patient was much exhausted. Mr. Croly, finding that the plugs were not then effectual, considered it necessary to plug the nose again, and then proceeded in the following manner:—A piece of lint folded to the size of the last phalanx of the thumb was *stitched through its centre* with a hemp ligature, leaving *two* ends sufficiently long to pass though the anterior nostril, and one through the mouth. The

plug was moistened with muriatic tincture of iron. The operator then took a gum-elastic bougie (No. 2) and transfixed its point with a needle armed with ligature-silk, and tied a loop on it; and (having removed the plugs which were first introduced) passed the bougie straight along the floor of the nostril; its point appearing behind the velum pelati was seized in a long forceps, and drawn forward through the mouth. The *double* ligature of the plug was passed through the loop and tied. The bougie was withdrawn through the nostril, and the plug, held between the ends of the first two fingers, was guided behind the velum and wedged into the posterior nostril by the point of the index-finger of the left hand. During this stage of the operation the hæmorrhage was alarming, and blood was coughed out violently into the operator's face. The patient struggled, and tried to close her mouth. The two strings which were drawn through the anterior nostrils, were untied, and held apart, and the nostril plugged from the front with pieces of lint introduced by a director, and secured by tying the double ligature tightly. The ends of these strings, and of that through the mouth, were fastened to the cheek with adhesive plaster. The hæmorrhage was thus fully controlled.

On the fourth day pus having appeared at the nostril, a solution of chloride of zinc in cold water was then injected into the nostril, and when the plug was sufficiently softened it was removed. By pulling the string through the mouth, the posterior plug was easily detached.

During her stay in hospital the patient was given light nutritious diet, and muriated tincture of iron was prescribed internally. Under this treatment she perfectly recovered, and was discharged from hospital in a few days.

*Case* 2.—M. M., aged 60 years, was admitted into the City of Dublin Hospital for excessive bleeding from the left nostril. The patient, who presented a pale anæmic appearance, stated that she was attacked a week previously with the bleeding. The usual remedies were first tried—and having failed, the anterior nostril was plugged with lint. This did not succeed in arresting the hæmorrhage.

Mr. Croly plugged the nose by means of Belloc's sound. Pus appeared at the orifice of the nostril; on the fourth day the plug was removed, and the nostril syringed with "Condy's Fluid;" the patient was discharged quite well in a few days.

*Case* 3.—A. B., a pensioner, 60 years of age, came under Mr. Croly's care for epistaxis, which continued for several days, and resisted all treatment. The patient was very much debilitated, the posterior nostril was plugged by means of Belloc's sound, and the hæmorrhage controlled.

*Case* 4.—Mrs. ——, aged 36 years, in the last month of pregnancy

(one of the causes of epistaxis stated by the writer), was seized with bleeding from the right nostril. The ordinary modes of treatment failed to arrest the hæmorrhage, which weakened the patient, and alarmed her very much. She was directed to snuff up a powder consisting of alum and sulphate of zinc. This having proved ineffectual, and the patient becoming very weak, Mr. Croly plugged the nose from the front by the late Surgeon Smyly's plan—viz., slips of lint a foot long, and half-an-inch broad, were introduced into the nostril by means of a gum-elastic catheter until the cavity was completely filled. The hæmorrhage was thus checked.

Mr. Croly made some practical remarks to the pupils on this important form of hæmorrhage, its various causes and modes of treatment, and pointed out the propriety of not interfering in certain cases in which the bleeding may be salutary, and impressed on them that plugging the nose should not be resorted to until the ordinary methods had proved unsuccessful.

These modes are raising the arm or arms above the head (as recommended and ingeniously explained by Dr. Negrier), cold applied to the forehead and nape of the neck, dry cupping the same region, placing the feet in hot water, directing the patient to snuff up astringent powders, &c.

He then detailed the several steps of the operation of plugging the nose, either by means of Belloc's sound, or an ordinary gum-elastic bougie or catheter, or by the method recommended by the late eminent Surgeon Smyly, of this city, which proved so successful in case 4.

Mr. Croly explained further the advantage of making the plug according to the plan described in case 1, which consists of stitching instead of tying it; thereby avoiding the hour-glass shape which the plug assumes when tied, and allows the blood to escape into the throat in consequence of not filling accurately the posterior nostril. He also advised that the plugs should not be removed until signs of suppuration are manifested by pus appearing at the orifice of the nostril, lest hæmorrhage should recur.

Mr. Croly also reminded the class that plugging the nostril is not only a troublesome operation, but very distressing to the patient; and is not unattended with dangerous results. Tetanus and pyæmia have sometimes followed, and the posterior plug in some cases has fallen down on the windpipe; this dangerous occurrence is to be avoided by tying the double strings *tightly* on the anterior plug, and making the posterior plug sufficiently large. The string through the mouth will be found most useful in withdrawing the plug from the posterior nostril, and will not produce the irritation alluded to by writers, if properly secured by plaster on the cheek.—*Medical Press and Circular.*

## ON THE OPERATION FOR STRABISMUS AND ITS AFTER TREATMENT.

By J. G. Hildige, F.R.C.S.I.

Notwithstanding the almost mathematical accuracy with which the operation for strabismus has been treated of by German and English surgeons, it occasionally happens, no matter how carefully the operation may have been performed, that the degree of parallelism resulting from it is far from satisfactory, the eye either returning to its former position or tending to wander in the opposite direction. A secondary operation is just as liable to be attended with similar results, besides being in no small degree irksome to both patient and surgeon. Having experienced this in my own practice I have long been anxious to discover a means of obviating it, and I now propose to describe, as briefly as possible, a mode of treatment which has lately suggested itself to me, and which I have found to be attended with most excellent results. It consists in drawing with an extremely fine point of nitrate of silver perpendicular lines of about one-fourth of an inch in length between the angle of the eye and the margin of the cornea, on the side of the eyeball opposite to that towards which the eye tends to wander. For instance, if the internal rectus be the muscle which has been detached (strabismus convergens), and if the eye some time after the operation shows a disposition to return to its former position, I draw the lines, two at the utmost on the conjunctiva, between the external angle of the eye, and the margin of the cornea; on the other hand, if the eye wander too much outwards after the detachment of the muscle and does not become parallel with the other eye after the expiration of the period allowed for the subsequent contraction of the wound, the lines are drawn on the nasal side of the eyeball, and in the same position as on the opposite side.

In order to explain more fully this mode of treatment I shall give the details of one or two cases to which it has been applied with the best possible result.

*Case* 1.—Miss de M——, æt. 10, of Kilkenny, was operated on by me for strabismus covergens in the month of May, 1866. The affection had come on shortly after birth; the child's mother, however, did not remember the exact period when it was first observed. The right eye was turned inwards to the extent of about two lines, and its vision had become impaired from disuse. I operated on both eyes at the same time, detaching the muscles to such an extent as to allow about one-quarter of a line for the subsequent contraction of the wound. At the end of a week the left eye had become nearly straight, but the right one had become more

divergent, so as to form an external strabismus of about one line and a-half.

As there was now little or no probability of the contraction of the wound acting to any extent on the position of the eyeball, I determined to make a trial of the nitrate of silver. I drew one or two lines with an extremely fine point of nitrate of silver, midway between the internal angle of the right eye and the margin of the cornea, and directed the patient to be kept in a darkened room, with cold applications to the eye. On the following day there was a marked improvement in the position of the eye, and it was only necessary to repeat once more the application of the caustic, when the eyes became perfectly parallel, and remained so. I saw this young lady about four months afterwards, when, to use her mother's words, no person would have known she had ever squinted.

*Case* 2.—Miss H., æt. 12, of Rathgar, was operated on for strabismus convergens on the 22nd of May, 1867. Her eyes became parallel about ten days after the operation, and shortly afterwards she was allowed to return to her daily avocation.

Three weeks elapsed before she again presented herself, when I found, on examining her, that her left eye had returned to very nearly the same position as it had occupied previous to the operation—that is to say, turned inwards to the extent of about one line and a half. She stated that she had been using her eyes pretty freely since I had seen her, and that her left eye had gradually commenced to squint again. I drew one line between the external angle of the eye and the margin of the cornea, and gave her the usual directions to abstain from using it, and to remain as much as possible in a darkened room for a few days. At the end of two days the eye had altered its position to the extent of one line, and, as well as I remember, it was not necessary to use the caustic a second time, as the eye became perfectly parallel, and remains so to this day.

I have treated other cases of failure of the operation for strabismus by this method, and my experience of it has convinced me that if it be resorted to within a short period after the operation, and if there be no incongruence of the retina present, it is almost certain (humanly speaking) to be attended with success. With regard to its mode of action, I am disposed to think that it is not wholly mechanical; in fact, that the psychical element, as it is denominated by our German brethren, is brought more or less into play; be that as it may, it has the advantage of being a simple and—according to my experience—a most effectual remedy, and unattended with any risk whatsoever.—*Medical Press & Circular.*

## HOLT'S OPERATION FOR STRICTURE: DEATH FROM PYÆMIA EXHIBITING REMARKABLE FEATURES.

Under the care of Mr. HAMILTON.

Although the treatment of stricture by Holt's method is now generally allowed to be a valuable addition to the surgery of this disease, still it cannot be denied that it is attended with some risk, and in the adoption of a practice which has many strenuous advocates, the observation of unfortunate cases must afford a valuable lesson.

T. F., æt. 62, a pensioner, of dissipated habits, was constantly in the habit of coming to hospital with retention of urine, on exposure to cold or the commission of any excess. On some of these occasions considerable difficulty was experienced in passing a small catheter. A very tight stricture was found at the anterior part of the bulbous portion of the urethra. The difficulty of introducing instruments was frequently much increased by spasm, and the mucous membrane was always in an irritable condition. Having often expressed a desire for some permanent relief, it was determined to adopt the method of Holt. He was accordingly kept quiet in bed for some days, and the urethra dilated with cat-gut bougies, until Holt's dilator could be readily passed into the bladder. The operation was performed on Saturday, June 27th, the strictures having been burst. A catheter, No. 8 size, was passed into the bladder; the patient was treated with quinine and opium, as directed by Mr. Holt.

June 28th.—He has had some shivering during the night; he complains of severe pains in the lower limbs, with hyperæsthesia and partial loss of motor power; passes water freely and without pain; there is no tenderness or fullness in the perinæum; pulse 120, and feeble. Ordered wine and beef-tea.

29th and 30th—Appears better, but still complains of soreness and complete loss of power in the lower limbs; no rigors or sweating; no tenderness in the perinæum.

July 1st.—Very much worse; the pulse at wrist scarcely perceptible: complains of pain and powerlessness of the lower extremities: tongue dry and brown: the surface of the body is covered with an eczematous rash, having a dark areola; the mental faculties are perfectly clear: he complains of irregular pains in the chest and abdomen. The respiration became very difficult some hours before death, which occured at ten P.M.

*Autopsy, twelve hours after death.*—The eczematous eruption still remains on the surface. The inferior wall of the urethra has been burst at the point of stricture into the corpus cavernosum. Some pus issued from the bottom of the fissure on pressure. The cavity of the bladder was small, but its coats immensely hypertrophied, with numerous sacculi

leading off from it; the ureters were much dilated: the kidneys tolerably healthy; the surface of the lungs was thickly studded over with an eruption identical with that on the surface of the body; the liver and other intestines were likewise spotted in a lesser degree; no deposit of pus could be discovered in any part; the muscular system seemed perfectly healthy; no abnormal appearance of the joints was discernible. The features of this case are interesting in some respects. The fatal termination must be attributed to a form of systemic infection, but there are many peculiarities in the symptoms, the paralysis of the lower limbs, the sensibility of the skin and muscular pains, the absence of rigors, sweating, or delirium, the appearance of the eruption on the body and viscera, are all uncommon. There can be little doubt that pyæmia is the chiefest source of danger in this operation, and the occurrence of suppuration in such a structure as the corpus cavernosum, must be a condition specially favourable for its development.—*Medical Press and Circular.*

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# Medicine.

## ON MITRAL CONSTRICTION.

Recent medical observation and research has done much to facilitate the diagnosis of constrictive narrowing of the mitral orifice from mere mitral incompetency with regurgitation of blood back from the ventricle to the auricle.

Some may think it a matter of needless refinement to take pains to distinguish between these two morbid states of the mitral aperture, but this is not the case, inasmuch as useful therapeutical rules depend on the correctness of the diagnosis; hence, although the question is often one difficult of solution, it is one worthy of some time and attention on the part of the physician. We proceed to lay down what appear to be the best guides to the diagnosis of a constricted mitral aperture, and then to speak of the prognosis and treatment of these cases.

The onward passage of the blood from the left auricle into the ventricle through an orifice that is abnormally constricted and narrow is frequently attended with a murmur having certain characters which distinguish it from the murmur of mitral regurgitation.

The murmur of *mitral regurgitation* is distinctly systolic, it is loudest at, above, and rather to left of, the apex beat, losing quickly in intensity and pitch on passing to the cardiac base. At the inferior angle of the left scapula, and beside the dorsal vertebræ, from the sixth to the ninth,

the murmur is more or less clearly audible, as we should expect, remembering that this is a backward, not a direct, murmur, and is caused by blood flowing back from the ventricle into the auricle.

The murmur of *mitral constriction*, on the other hand, is a direct murmur, and occurs at the time when the ventricle is filling from the auricle, hence it is not systolic in rhythm, nor is it diastolic, as sometimes stated in books, but it is post-diastolic, or pre-systolic, and this last seems the better term, since in a well-marked case, this murmur is caught just before the systole, running up as it were to the first sound. When strongly developed, it may completely cover the second sound at the left apex, but it is not often loud enough to do this.

With respect to situation, this murmur is loudest at, to right of, and above the apex beat; it is very soon lost, passing upwards and towards the left, and is not audible at the inferior angle of the scapula.

When the murmur is uncomplicated with the murmur of mitral regurgitation, and it may occur where the mitral valve is quite competent, loudness of the second sound over the pulmonary artery is a sign that, according to Stroda, the case is one of narrowing of the mitral orifice, rather than of mere roughness of the surfaces.

Reduplication of the second sound at the base may be noted, and is due to want of synchronism between the actions of the two sides of the heart.

In character this murmur has been described by Dr. Flint, of New York, as " somewhat rough, resembling the sound produced by throwing the lips into vibration by the expired breath. When this character of sound is strongly marked I have called it a *blubbering* murmur. This character of sound I suppose to be due to the vibration of the curtains which compose the mitral valve. It is heard with its maximum of intensity around the apex of the heart. Often it is limited to a small space. It is propagated best in a direction from the apex, anteriorly towards the median line, not so well in an opposite direction. Sometimes it is so loud as to be heard over a considerable area. It is presystolic in rhythm, and I have three cases now under my care in the Bellevue Hospital presenting this murmur. Its presence denotes, with some exceptions, the existence of mitral obstructive lesions; but its absence is no proof that such lesions do not exist. It is present in only a certain portion of the cases in which obstrusive lesions exist; and it is especially apt to be present in one variety of these lesions, viz.—when the mitral curtains become adherent at their sides, and form what is known as the button-hole contraction."

Dr. Flint observes further, that this mitral direct (pre-systolic) mur-

mur may be caused by aortic regurgitation, even when the mitral orifice is quite normal. He explains this by the fact that the aortic regurgitant current fills the ventricle just at the time when the mitral direct current is doing the same thing, the regurgitant aortic current by distending the ventricle approximates the curtains of the mitral valve, and then the incoming blood from the auricle throws these into vibration, and so causes the murmur.

I have not myself had opportunity to verify this observation of Dr. Flint's, but it appears to me of interest in reference to the occurrence of "tactile thrill" or "tremor" in connection with the murmur of mitral constriction. When the mitral murmur is caused in the way alluded to by Dr. Flint, the probability is that the eddying together of the two currents (the aortic regurgitant and the mitral direct) in the ventricle would produce thrill felt by the hand applied in the usual way over the heart.

Those who, like Dr. Peacock and Dr. Sutton, have lately drawn attention to this mitral constrictive murmur recognize tactile thrill as a common, and yet by no means a constant, sign of this form of valvular disease, and to ascertain under what conditions this thrill does or does not occur, is a subject for further observation and inquiry.

The pre-systolic mitral murmur may exist by itself and with a perfectly competent mitral valve, but often it co-exists with a mitral systolic regurgitant murmur; then its diagnosis by physical signs with any certainty is impossible.

The points most likely to guide us are to watch the rhythm of the murmur while the pulse is felt in the carotids by the finger; to examine for thrill over the ventricle, and to remember that the effect of the constrictive murmur is to diminish the amount of blood that passes into the left ventricle, so that the chief amount of action will be found on the right side of the heart, a significant fact pointed out by Dr. Peacock in the *Medical Times* 1867, p. 131.

With respect to the effect of a constricted mitral aperture on the general circulation it may be stated that they resemble in a measure those of mitral regurgitation.

The left auricle, having to act with extra power, becomes hypertrophied and thickened; at times a notably dull spot may be found at the left back opposite the fourth dorsal vertebra, where very marked tubular breathing is heard in consequence of the left bronchus being compressed by the enlarged auricle, and, in regurgitant disease, the murmur is distinct at the same spot.

The effect of regurgitant disease on the left auricle is to dilate and

thin its walls, rather than to produce the thickening and hypertrophy which constrictive disease causes.

Be the auricle thickened and hypertrophied, or be it dilated and thinned, the lungs are sure to suffer; dyspnœa, cough, with bloody expectoration, and in bad cases, pulmonary apoplexies, are the results, but they do not come on so fast in mitral constrictive disease as they are apt to do in regurgitant disease, nor yet does dropsy of the extremities so soon make its appearance. The pulse, in mitral constriction, is small but regular, the face pale rather than livid, and the appearances those that betoken an imperfect distribution of arterial blood over the system.

I now subjoin a few short notes of a case to illustrate the statements that have been made.

The case was marked down in my note-book as an instance of mitral constrictive disease in August last, and the patient is still under observation.

Eliza W., æt. 23, first seen August 5th, 1867. Been ill between five and six years since she had rheumatic fever. She now feels very weak, has cough, dyspnœa, palpitations, and frequent attacks of hæmoptysis. She looks pale, rather thin. Now and then has noticed very slight œdema of ankles; pulse 112, remarkably small, not hard, regular; chest well-formed, sounds well; breathing harsh at both sides, with rhonchal sounds over left; heart's impulse not extended, scarcely felt at xiphoid cartilage; at apex and to right of it a short murmur inaudible at base, and inferior angle of left scapula. This murmur seems to precede the first sound of the heart, and was noted in August as pre-systolic. Under the influence of tr. ferri., great amendment took place, and of late there has been no hæmoptysis.

In this case the symptoms dated from an attack of rheumatic fever five years previously; since which time the chief complaint was of great debility, with now and then hæmoptysis, the patient looked weak and anæmic, had no dropsy and no certain signs of phthisis, the pulse was very small and regular, and the interval before the ventricular systole was occupied (as I judged by several auscultations) by a murmur. The second sound over the aorta was weak, and the right heart did not seem to suffer much. Under the influence of steel much amendment took place.

From all these circumstances I judged the case to be one of narrowing of the mitral orifice, not to any great degree, for the pre-systolic interval was not unduly prolonged, as it is when the channel is very narrow, and the ventricle therefore long in filling, neither as yet was the right heart notably involved, hence it seemed a case that might be viewed, as the event proved, hopefully.

To conclude with a word on treatment. In cases of constricted mitral this should be pretty uniformly on the tonic plan. Good diet with moderate allowance of stimulants, and twice a day from 10 to 20 drops of tinctr. ferri in water after food. By such measures we give power to the left ventricle and enrich the blood. The iron may be changed now and then for quinine or bark, for a time, but I believe the best results will be obtained by a prolonged course of the chalybeate in small doses in simple form, and always administered soon after a meal.

Digitalis is not to be relied upon in cases of pure mitral constriction; it is, indeed, more likely to do harm than good, by enfeebling the power of the already poorly nourished left ventricle.

In mitral regurgitation, on the other hand, digitalis is invaluable for the relief it affords, while chalybeates very often embarrass the circulation, increase the regurgitation, cause hæmoptysis, and have therefore to be abandoned.—*Medical Press & Circular.*

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## A NEW AND EFFECTIVE METHOD OF TREATING PHTHISIS PULMONALIS.

Dr. Carl Both, Boston, Mass., has written a monograph, in which he pronounces the curability of consumption with the greatest confidence, through *artificial calcification.* It is a practical application of the cellular pathology, announced by Virchow; and the author's theories may be given in his own words:

"As a nation consists of millions of single individuals, each holding a superior or inferior position, each dying and being replaced without injury to the whole, so is our body a commonwealth of cells, each of which has its office; each may die and become replaced by another. As a statesman watches over each individual, and tries to improve each for the benefit of the whole, so the physician should know all cells of the body, their office, and their place. He should cause their removal in case of unfitness or decay, and prevent such cells as do not fit its general structure from entering the body."

The cells composing our body live and are sustained by the food we eat, and if we cut off our food, we cut off the nourishment of the cells. By giving different food, different effects on the cells are produced. The blood requires lime for calcifying displaced or degenerated cells by depositing that substance in them.

He wishes it to be understood, that tubercles in the lungs are composed of, and originate from blood globules which have escaped out of the general circulation, through the bursting of an obstructed capillary vessel. That this obstruction takes place where the respiration is sup-

pressed. From this the conclusion is drawn that tubercles can nowhere originate in the lungs, except in those parts where respiration has been oppressed or has ceased.

The natural healing process consists in the calcification of the diseased part, so that they appear as if made of chalk, though the original cells and tissues can yet be detected by the microscope. It is evident, therefore, that in such cases, the blood must have been able to furnish a considerable quantity of lime, to provide for the calcification of the decayed parts. His treatment is divided into three sections, each of which finally support the other in their effects:—

1*st.*—The *extension and cleansing of the lung by pressing air into it.*

2*nd.*—The *introduction of lime into the blood* in sufficient quantity for the calcification of the tubercles; and the *purification of the blood by higher oxidation.*

3*d.*—The *determination and regulation* of a diet to suit the particular form and degree of disease.

The direct treatment of the lungs consists in pressing the air into them by natural inspiration, powerfully stimulated by certain muscular exercises which are calculated to effect this object. If, in the case of a collapsed lung and chest, the pressure of air in the lungs is increased, that organ and the thorax will necessarily be extended; and the air will pass gently and gradually into the small bronchi. The air vesicles and obstructed bronchi being opened, the pus and mucus contained in them will be expelled by the increased ciliary motion, by the revolving air, and by the action of the cough. At the same time the capillary circulation will be increased, diosmosis of the cells renewed, and many of them rescued from fatty degeneration and decay.

To increase the nervous action of the lung, and to produce at the same time an increased pressure, tension of the respiratory muscles must be resorted to, as a pumping force on one side, and as an irritant on the respiratory nerves by reflex irritation on the other.

To demonstrate the result the following practice will be found of service: Let a person rest the whole of his weight on the ends of his toes and fingers in a horizontal position. He will find, on rising, that he must take larger and more forcible inspirations than were otherwise possible. By means of the forced inspiration effected in this way, air is driven into the diseased part of the lungs, and distends them in consequence.

The treatment of the blood consists, first, in purifying it from those substances which cause the profuse perspiration. The food is divided into two classes, respiratory and plastic. The first is that which contains

no nitrogen. The second is that which does contain nitrogen, and which replaces the materials consumed by the action of the body.

The treatment of the blood consists, second, in the introduction of *phosphorus* and *sulphur*.

Having provided for the introduction of sulphur and phosphorus into the blood, we are, third, to obtain a sufficiency of *lime*, *silica*, and *magnesia*.

These materials are abundantly found in the hulls of oats, barley, wheat, and rye; but in the early stages of the treatment these cannot be readily digested. Extracts of herbs and plants, known to be rich in these three substances, such as *Triticum repens*, *Achillea Millefolia*, *Marrubium vulgare*, *Leontodon taraxacum*, &c., serve as a proper substitute. The general rule for the administration of food, in every case, should be the following: to adjust the quantity given to the amount of oxygen to be absorbed. For *respiratory* food, make use of whey, freshly made of boiled milk from which the caseine has been separated by adding a little cream of tartar; malt, sugar, honey, fresh butter; in the spring and summer, milk, after it has become thick by the formation of lactic acid. For *plastic* food give Liebig's extract of meat, when the digestion is very bad! Raw meat, chopped fine, given in the form of a salad, is excellent. When the digestion is good, beef, mutton, game, and fresh fish, are the best articles of food.

The bread should be made of rye meal and corn flour (not sifted too finely). Sago, cracked wheat, farino, rice, corn and oatmeal, tomatoes, and all kinds of fresh and acid fruits, may be given as the case requires it.

A detailed statement is added of the history and treatment of twenty-one patients, between the ages of nineteen and forty-seven, who have been benefited, or entirely cured; with the exception of those who had diseases of the bowels. The author believes that by following the method described, every tubercular affection of the lung can be arrested without fail—only there must not be large open caverns.—*New York Medical Record.*

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## THERAPEUTICS OF PAIN.

Professor William A. Hammond, of Bellevue Medical College, New York, in his lecture on the above-named subject, reported in the New York *Medical Gazette*, appreciates the value of various drugs as follows:

1. **In nervous headaches.**

*Oxide of zinc* is of great value: ordinary dose two grs. three times a day after meals: maximum dose five grs. It is best given in form of pills.

*Nux vomica* is preferable to strychnia. The dose is $\frac{1}{4}$ gr. after meals. If the patient is chlorotic it is well to combine a grain of ferri redact. and $\frac{1}{2}$ gr. sulph. of quinine.

*Bismuth*, in the form of subcarbonate, will often take the place of oxide of zinc. Dose, two grs. after each meal. Bismuth probably assists digestion more than any mineral tonic, and is of use when there is gastric disturbance.

*Bromide of Potassium* is serviceable when the nervous system has been irritated; when exhausted it does harm.

*Bromide of Ammonium* is similar to the brom. of potas. in its action; dose need not be so large. Dr. H. often uses both combined.

*Opium* and its preparations are rarely of value in this disorder. If used the hypodermic method is best.

*Narcein* was brought to the notice of the Academy of Medicine, Paris, a few years ago by Claude Bernard. Dr. Hammond refers to the unfavourable notice of this article by Dr. Da Costa, but still thinks that given in large doses it has a decided hypnotic effect.

*Phosphorus* is very useful in all forms of nervous headache. It is difficult of administration, and leaves an unpleasant odour about the person. The phosphates do not produce the effects of phosphorus. The best results are obtained from phosphoric acid dilute, in doses of thirty minims largely diluted.

*Arsenic*, as a nerve tonic, stands next to zinc in value. Fowler's sol. has generally been used, but of late the arsenious acid has been given in doses of about $\frac{1}{40}$th of a grain; particularly in cases of hallucination dependent on exhaustion.

As to the value of *Galvanism* there are two very diverse opinions: one that it is useless; the other that it is nearly a panacea. The truth lies probably on the middle ground. We cannot act directly upon the brain, to any considerable extent, by the *induced* current or by reflex action. Dr. H. advises always the *constant current*; being careful to avoid too great intensity lest amaurosis be produced.

2. In the treatment of *Neuralgia*.

*Belladonna*, although at one time much overlauded, is a very efficient drug. Dr. Hammond has not used atropia often, as the dose is difficult to graduate. The use of belladonna is chiefly to change the habits of the system. You may begin with doses of $\frac{1}{4}$th grain of the extract, and increase as necessary.

*Hypophosphites* are useful; may be given in doses of from ten to twenty grains. They act by setting free phosphorus in the stomach.

*Hypodermic Injections of Morphia* may be used during the paroxysm. In their use avoid the face; a good point is the inside of the arm.

*Aconite* is next in value. Simply rub the tincture upon the painful part until a pricking is felt. The action is often very powerful. Dr. H. once caused temporary paralysis of the arm in a lady by the too free application of the tincture.

*Chloroform* may be used externally, internally, or by inhalation not carried to insensibility. Repetition of inhalations may break up the paroxysm.

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# Midwifery and Diseases of Women and Children.

## RARE CASE OF MIDWIFERY.

By H. H. Lowrie, M.D., of Plainfield, N. J.

The following remarkable case of midwifery chanced to come under my observation while practising in Washington City, D. C., and thinking it worthy of note, I give you a brief sketch of it.

Mrs. L. D., æt. 32, the mother of three fine healthy children, was taken with labour pains December 30th, 1863, at noon; and as she had generally got along without a doctor, she did not send for one at this time. The membranes were ruptured after a few pains, and the liquor amnii passed off in large quantities. The day passed by, and night came, but with no prospect of delivery, although the pains were still violent. The night passed, but there were yet no signs of the birth of the child.

December 31st dawned and declined without delivery; and at noon of January 1st, 1864, I was summoned to her. I found her lying upon her bed, very much prostrated from the pains and want of sleep; pulse quick, and countenance ghastly. I ascertained that her bowels and bladder had been emptied regularly up to the time of labour-pains coming on, and that she had enjoyed perfect health up to that time.

I made an examination, and at once discovered the left shoulder presenting. Between the pains I endeavoured to introduce my hand, but without success. A few moments after this the arm and hand of the fœtus protruded. You may imagine what a case I had to deal with, membranes ruptured forty-eight hours before, waters all discharged, and the uterus still contracting powerfully. I immediately administered chloroform, until the whole body seemed relaxed, and the uterine pains somewhat checked. I now returned the prolapsed hand and arm, and endeavoured again to find a foot. It was impossible. The pains had continued for such a length of time, *without intermission*, and the child was so packed down between the pelvic bones, that the introduction of the hand was impossible. Thinking nature could do no more than she

had done, I dispatched a messenger for my old friend and constant adviser, (now the late) Dr. S. C. Smoot, asking him to bring his Obstetrical Instruments, but the message being miscarried, the doctor came empty handed. I again administered the anæsthetic, and Dr. S. made an attempt to introduce his hand. After *an hour* passed in the trial, the Doctor was compelled to desist, with no better result than my previous one.

Our only resort now was evisceration, and this we agreed upon at once.

I remained with the patient, while Dr. S. returned for his instruments; but before his return, (which could not have been more than forty minutes), the child was passed into the world, a sight to behold! Version *did not* take place, but it advanced with every pain, the sternum gave way, and the chin and face of the child were buried into the thoracic cavity, and in this condition was delivered. We took the child afterward, and *folded* it in exactly the same manner in which it was passed into my hands, and the measurement was *about one-third more than the measurement of the head of an ordinary fœtus at birth!*

The child was *dead*, of course, and had been for hours before we saw it, as we told by the appearance of the prolapsed hand and arm.

This case shows not only the powerful contraction of the uterus, but the wonderful strength of the woman, and the determination of nature to deliver unaided.

I do not hesitate to say that the administration of the chloroform was a great adjuvant to the case. It is true, we gave it for the purpose of quieting the pains and allowing us to introduce the hand, and if possible turn the child; but as we were frustrated in that, the rest, and relief from pain for an hour, was considered ample compensation for the administration. She awoke as from a sound sleep, and seemed very much refreshed.

More than ordinary care was taken in the treatment the days that followed; not a single bad symptom appeared; and at each daily visit I found her better and stronger, and in twenty days she was out of bed. Complete recovery followed, and I have frequently seen and prescribed for her since. Obstetrical writers tell us that this presentation *is not followed by delivery* without the aid of art.

A celebrated obstetrician of Dublin issued an essay in 1861, explaining the process of "*Spontaneous Expulsion of the Fœtus.*" but in all cases noted by him, the child was carried down into the pelvic cavity, and there "*spontaneous evolution*" took place, and the *feet* came down, and the remainder of the labour was terminated as in an ordinary footling case.—*New York Medical Journal.*

Canada Medical Journal.

MONTREAL, DECEMBER, 1868.

## THE ONTARIO MEDICAL BILL.

The General Council of Medical Education and Registration of the Province of Ontario, have introduced a bill into the Local Legislature, the provisions of which will, if it becomes law, do much to lower the standard of Medical Education in that Province. By the provisions of that act powers are sought by some of the members of the profession in Ontario, to restore the old Medical Board under a new name. They seek to establish a central board of examiners before whom all persons desirous of practising Physic, Surgery or Midwifery in the Province of Ontario, shall appear and submit to examination before they shall be entitled to registration. All persons, no matter from whence they come, or from whatsoever college or university they hail, must as at present appear and pay fees to entitle them to registration. The promoters of this bill, however, regard the examinations of the colleges and universities in Canada as insufficient, and with pompous self-conceit deem themselves alone capable of administering the required test. Furthermore, they are endeavouring to upset an enactment which is in full force in Ontario, without going to the profession generally for their views on the subject.

We are not aware how this act will work with the local enactments in force in our Province, but we believe that without doubt the act of 1847, which has been found with us to work well, and which gives to Licentiates of our College of Physicians and Surgeons the privilege of practising in Ontario, will be rendered ineffective in that particular. This will be a manifest injustice to Lower Canada Licentiates, as all persons coming from Ontario can practice their profession in our Province, on the strength of an Ontario license. A singular anomaly in this act is that no attempt is made to legislate for Eclectics, Homœopaths and other irregular bodies who have legislative protection in Ontario, and who can (and sometimes do) pass young men, and procure for them a governor's license on payment of a few dollars, without their being obliged to

undergo any test as to proficiency, or prove that they have ever attended a single medical lecture.

We regard this measure as narrow minded and highly injudicious, and fully hope that the promoters will be removed from their present position as members of the General Council of Medical Education and Registration for Ontario. All good and true members of the profession should see to it that these men, whoever they may be, have abused their high position, having endeavoured surreptitiously to introduce into the Laws of the Province of Ontario an enactment which will disgrace their statute book. This act, if it become law as it now stands, will be in direct opposition to the report of the Committee, on Registration of Medical Practitioners, appointed by the Canadian Medical Association, which held its meeting in our city in September last, a meeting composed of all the leading Medical men in the Dominion, and presided over by the Honourable Charles Tupper, C.B. The report of the Committee was laid on the table for further consideration, but there was not a dissenting voice, nearly all the convention regarded it favourably, and that report recommends a general law for the whole Dominion, similar to that now in force, in Great Britain, whereby a general council shall be established, to possess visitorial powers. It is not intended that they shall be an examining body, but that they shall have the power of keeping the various examining bodies up to their work, and if any one of them fail in duty or are lax in discipline, that the Council shall have the power of striking them off the list of recognised colleges or universities; and furthermore, that graduates or licentiates of such colleges or universities, shall in law be denied registration, so long as the irregularities or laxities exist. This is the general tenor of the report. We write from memory, as we have not a copy of the report before us.

In the November number of *Blackwood* will be found an interesting article from the pen of Mr. Charles Lever, entitled Medical Lectures. In the course of the article he says :

"If there is not any class of men who contribute more unbought services to their fellow-men than doctors, there is not either any who make less parade of their accomplishment, and more shrinkingly withdraw from public gaze or public comment. Of the vast mass of topics which occupy attention in the world, few are as well, none are more, qualified to speak than physicians. It is not merely that the range of their educational course is wider than most other men's, but that their sympathies are more extended also; their daily contact with people of every grade and condition—their close relations with humanity in all its moods—and the peculiar authority they exercise, so dependent as it is on the qualities and

gifts of him who wields it—make these men a priesthood, with a confessional scarcely less searching than that of Rome itself. I have always felt that their absence from Parliament was a great loss. It is not merely that there are a variety of topics on which they could speak with authority and instruction, but that to whatever subject they addressed themselves they would bring that blended knowledge of facts and human nature, that composite structure to which science gives something and humanity more, which is sure to be of immense value in a legislative assembly."

This is most true, and if at the present time in the Ontario Legislature the profession were fairly represented, there would be little fear of a gross injustice being perpetrated through the hasty and ill-judged efforts of a few designing men; represented as a class, not as at present by a few men who are, improperly, looked upon as the mouth-piece of the profession, but who have exchanged the quiet usefulness of the physician for the noisy turmoil of the legislative hall. The effect of this act will be to force parents and guardians in Ontario to send young men desirous of entering the profession to the schools in that province. They will be unable to seek the superior advantages held out to them in other parts of the Dominion, and Montreal, with its large hospitals, will be lost to them. We would ask how will this react on the succeeding generation of medical men. If a central board of examiners is established before whom all persons desirous of registration must appear for examination, within ten years, medical schools will become as numerous in Ontario as they are in the United States, and few of them will possess the means of affording even an elementary education. This must and will be followed by the addition to the ranks of the profession in that Province, of a legion of men indifferently educated, as it will be in the interest of the several schools to ensure the success of their students. We do earnestly hope that the good sense of the members of the Ontario Legislature will lead them to throw out the bill as altogether unworthy of their consideration.

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## "THE CANADA SCOTSMAN."

It has not often occurred, since we assumed the editorial chair, that we have felt ourselves compelled to notice in our columns the comments which the secular press have made upon medical subjects which have at various times absorbed the public attention. Indeed we have more than once purposely forborne, rather than raise a controversy; but the issue of the "Canada Scotsman" of the 21st of November contains such a foul slander upon the fair fame of those who occupy the position of pre-

fessors in our medical schools, as also upon the students who attend them, that to remain silent and to allow it to pass uncontradicted would be utterly unjustifiable. The article in the "Scotsman" to which we refer purports to be a comment upon the horrible case of abortion perpetrated by a Dr. McConnell a few weeks ago at Georgetown, Ont. The "Scotsman" says "medical students are everywhere notorious for their high-handed revelry and drunken orgies, and the professors entrusted with their training, far from checking these excesses, are themselves not unfrequently guilty of the same." A baser slander—whether as regards professors or students—was never penned, and we deeply regret that a paper conducted so ably and generally so moderately, should have been the means of sending broadcast over the Dominion, and even to Scotland, such an unfounded accusation. We are not going to assert that medical students are saints, but we do state it for a fact, and our knowledge on this head is perhaps a little more accurate and extensive than that of the editor of the "Scotsman," that as a body they are hardworking and industrious, and certainly do not merit the wholesale abuse which the paragraph quoted above pours upon them. That there are black sheep among them is unfortunately too true; but that a class of young men which numbers some five or six hundred in attendance upon our Canadian schools, should be held up to scorn, because of the unfortunate failing of one or two, is, to say the least, very unfair. Among a certain class of people, and it seems to us that the editor of the "Scotsman" belongs to the clan, the name of medical student is synonomous with all that is bad, especially as regards indulgence in intoxicating liquors. This is simply owing to the well known fact, that the evil doings of a few often bring disgrace upon many, especially in the estimation of those who are either too blind or too bigoted to examine for themselves. The unfortunate act which Dr. McConnell committed when in a state of maudlin intoxication, cannot, so far as we can see, be plead as any justification for such a wholesale slander as that circulated by the "Scotsman." We hardly know whether we should say one word in regard to its attack upon those gentlemen who hold the position of professors in the medical department of the various universities in the Dominion of Canada. Most assuredly they need no defence from our pen. They are all men of the highest professional attainments, and their reputation as gentlemen is only excelled by their reputations as physicians and teachers. To say they either wink at or encourage "high-handed revelry and drunken orgies" is a falsehood of the basest kind—a still baser one, to say they are themselves guilty of it. None more than they are so sensible of the great responsibility which rests upon the physician, and upon every proper occasion this

responsibilty is fully impressed upon the students. The article from which we have quoted our extract is in the worst possible taste. Let us assure its author that the reputation of the professors whom he so unjustly slanders, will live long after he has been forgotten.

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Entire removal of the tongue for Epithelioma of that organ was performed by Dr. Fenwick, on Friday the 20th November, at the Montreal General Hospital. The patient was a gentleman from Canada West, who came to Montreal to seek advice touching a disease of the tongue, which had been pronounced to be Epithelioma. The operation as performed was speedy and bloodless, being that described by Mr. Nunneley of Leeds. An incision was made in the median line between the chin and hyoid bone, and the genio hyoid muscles separated. A long curved needle, to which was attached the chain of an *écraseur* was then introduced into the mouth, through its floor, and close to base of the tongue; this was pushed over the tongue as far back as possible, the tongue being forcibly drawn out of the mouth by a piece of strong thread which transfixed its substance. After applying the chain and strangulating the organ, the operator proceeded to ablate, and the organ was severed in nine minutes and a half. The case has progressed most favourably, the patient returning home, a distance of 190 miles, on the 12th day after the operation.

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## THE CASE OF JACKSON vs. HYDE.

We give below an account of the somewhat celebrated case against Dr. Hyde, of Stratford, for alleged malpractice. Damages were obtained to the amount of $250. It is exceedingly difficult to understand upon what grounds the jury returned such a verdict. If Dr. Hyde was really guilty, surely this sum is far from an adequate compensation for the loss the girl has sustained in consequence of his criminality. The conviction forces itself upon our mind that the jury were led from sympathy, induced by the presence of the girl, whose arm was submitted to their scrutiny, to commit a great error. Dr. Hyde was guilty or he was not. If guilty, then the small sum of $250 cannot be regarded as a sufficient recompense to one whose welfare was placed in his hands. But surely the statement of the Judge, that "no evidence was brought forward to show the defendant was unskilful, except it might be so inferred from this case, and many of the most eminent medical men in the Province gave it as their opinion that he acted

skilfully, and that any other course might have endangered life;" surely, we say, such strong language should have secured a verdict for the defendant. Actions for malpractice have become too frequent in Ontario, and we are induced to consider the question why it is so. We shall, at another time, endeavour to reply. In the meantime, we would beg of our medical brethren to beware of the temptations to express an opinion upon the professional conduct of a brother practitioner, regarding a subject with which he can be only imperfectly acquainted:

A STRATFORD DOCTOR SUED FOR MALPRACTICE.

TORONTO, Monday, Oct. 26.

The case of "Jackson vs. Hyde" was specially set down for trial this morning, at the York Assizes now being held in this city, before Mr. Justice Morrison. It was an action to recover damages for alleged malpractice, and excited so much interest among the medical profession that the court presented more the appearance of a school of medicine, from the large attendance of eminent practitioners and students, than of a court of law. Hon. M. C. Cameron and Mr. R. A. Harrison appeared for the plaintiff, and Hon. J. H. Cameron, instructed by Mr. R. Smith, for the defendant. The plaintiff resides in the county of Waterloo, and the defendant in Stratford.

Mr. Harrison, in opening the case, said it was an action brought against the defendant as a surgeon, for malpractice, in amputating the arm of the plaintiff, who some six years ago had her hand crushed by a threshing machine, when she was 14 years of age. The defendant was called in, and amputated above the elbow when he should have amputated above the wrist.

John Jackson—I am father of the plaintiff. She was born Nov. 25th, 1848. In 1862 she received an injury to her hand by a threshing machine. My hired man was threshing oats, and the girl went to the barn where the process was going on, and while putting straw in the thresher, the fourth and fifth fingers of her right hand were cut off. She was then able to move her arm at the elbow, and also one of her fingers and thumb. I sent for Dr. Flynn, but he did nothing. I then sent for Dr. Hyde. He said nothing could be done till next morning. He came, consulted with Dr. Flynn, and the latter, in the presence of Dr. Hyde, said he thought he could save the forefinger and thumb, or amputate the arm below the elbow joint. I paid Dr. Hyde $20 for the amputation, and some $40 for visits and attendance. I have endeavoured to get an artificial arm for my daughter, but the maker of these limbs said he could do nothing till the girl attained her full growth. Two or

three months ago I sent her to Mr. Black, but he said he could not get an arm to fit.

Cross-examined—The third finger was hanging from a cord about an inch long. She lost no blood at all scarcely. She sat up all night nearly. I went to bed towards morning. Next morning her arm was scarcely swollen, and no appearance of discoloration that I could see; she had no fever, and could move her finger and thumb next morning. Do not know why Dr. Flynn did not act. It was not because the case was too serious. Dr. Flynn told me Dr. Hyde had his (Flynn's) instruments. Dr. Flynn remained till Dr. Hyde came. They told me they wanted daylight for the amputation, and could do nothing till the next morning. Dr. Flynn attended while the amputation was being performed by Dr. Hyde. I did not bring the action sooner, because Mr. Norris spoke about waiting till the girl attained her full growth. I always intended to bring an action against the doctor. Knew a person named Lozenger, but did not speak to him about the amputation being performed; nor did I speak to Gibson about it, to my knowledge.

Re-examined—I requested the doctor to save the finger and thumb if possible.

John Jackson, junior—I am brother of the plaintiff. The bones produced were taken from my sister's arm. They were buried in a box in the ground, where they remained till two or three weeks ago, when I took them out of the ground and gave them to Alexander Thompson, who has had them since.

Alex. Thompson—These are the bones I received from the last witness. It was then shortly after the accident. The little finger, third and second were removed. A tendon was hanging from the little finger. The first finger was not injured except a little scratch. The thumb was perfect. I saw her move the thumb and finger. I saw very little blood. There was no swelling. She talked freely to those about her. I heard Mr. Jackson ask for the forefinger and thumb to be saved. I was present when the operation was performed. Dr. Hyde performed it. I have known Miss Jackson for several years. Her health was always good.

Cross-examined—A portion of the bone was gone on the second finger. It was the lower portion of the hand. The hand was torn up to the wrist. I saw her turn her hand over—a portion of the palm of the hand was gone; the bones of the little finger side of the hand were gone. A portion of the bone above the wrist was bare about half an inch. Think half of the hand had received no injury.

Dr. Alex. Hill—Have been in practice nearly nine years, though only a licentiate of Canada a little over three years. Was at plaintiff's

place after the accident, having been sent for. Examined the injured limb; cannot tell accurately all I saw wrong with it. The little finger and that next were entirely taken away. One tendon with its muscular attachment was drawn out; know the thumb was there, but cannot recollect about the index finger; at the time and ever since, I said that a little above the wrist was the place where the amputation should have been performed. At the time I thought the entire hand might have been removed, though I have modified my views since. To have left the elbow joint and considerable part of the forearm would have been of considerable assistance to the girl. By the New York professors I was taught to save all of a hand and arm that I could—to use "conservative surgery"—and rather run the risk of a second amputation than cut off much at first. I observed after the amputation that the flap had been cut through in the inner side, which, of course, would retard the healing, and prevent its making so nice a stump. Some five or six days after, the stump looked blue and in anything but a healthy condition—as I supposed, in consequence of the cold application having been kept on too long; but I did not blame Dr. Hyde for this. He left the case in charge of Dr. Flynn, who carried on these cold applications so that I do not know where he would have stopped if some persons had not arrested him.

Cross-examined—The injury so far as I can remember extended about half way into the hand. The wrist joint was injured—the injury extending midway into the wrist. One of the tendons, which had been drawn out, extended quite as high as the joint of the elbow. Some of the carpel bones were gone. I was not taught that in case of such an injury the amputation ought to be performed in a part clear above the injury, so as to prevent any complication; if much crushed, I would not amputate in the soft, wounded portion of the limb; but the place of amputation would altogether depend on the extent of the injury. If there was a considerable laceration of the ligament, and the bones were badly smashed up, I think amputation above the affected portion necessary. We amputate for other reasons besides the fear of mortification. If vitality is so much depressed that a healthy, granulating surface could not be secured, amputation above the injured part would be a necessity. If the tendons were drawn out and much injured, the same course would be advisable. I cannot tell how many muscles have a common origin with the one injured in the girl's arm. Some writers give 18 and some 20.

Mr. J. H. Cameron—How many are there of each kind?

Witness—Just wait a little. Since you are so anxious to learn anatomy I'll teach you—(laughter). Witness then enumerated some of the muscles.

Re-examined—If, instead of the bone being crushed, the flesh had merely been torn off, I do not know that I would have amputated. The drawing out of a fine tendon with any portion of the muscle attached would not have induced me to do so.

To Mr. J. H. Cameron—The letter produced I wrote to Dr. Hyde. In it, I more fully set forth the case than I have done to-day; but when I wrote that I was not on oath. (Laughter). Dr. Hyde requested it as a private letter, which was not to be used in court.

Mr. Cameron—Dr. Hyde did no such thing.

Louis Hellmer—I was at Mr. Jackson's on the evening of the accident. The hand was badly broken about the wrist, but the thumb, and, I think, a finger were still on. I did not see her move them. The skin of the arm above the wrist was not broken, that I saw. I went after Dr. Hyde. He lived at Stratford, 13 miles distant.

Dr. Hall—I practice in Toronto, where I have practiced 30 years. I have heard the evidence in this case. I give an opinion reluctantly on the evidence recorded. I think I should have tried to save the thumb and finger.

Cross-examined—On the face of it simply, one would say that the finger and thumb ought to have been saved. But if the injury was such that a proper flap could not be obtained, it might be necessary to operate higher up. I could not say that the injury was not such as to render amputation necessary higher up. It is very hard to say at this distance of time, and not having seen the case, what ought to have been done; and I would volunteer the statement that in the country an operation is a very different thing from what it is in the city, where assistance can be rendered. Not having the full facts, it is difficult to judge.

Re-examined—Supposing the hand completely smashed, it might not have been necessary to amputate above the elbow. It is possible to save a limb, almost every bone of which is crushed.

Dr. Shaver—I reside in Stratford. I have been in practice since 1854. (Mr. M. C. Cameron explained to Dr. Shaver the nature of the previous evidence, as Dr. Shaver was not in court when it was given). From your statement I should hardly think it necessary to remove the arm above the elbow. I am supposing the blood vessels, nerves and arteries were all right.

Mr. J. H. Cameron—But we have no evidence of that.

Dr. Shaver—It would also depend when the operation was performed—whether there was mortification or gangrene.

Mr. J. H. Cameron—But you would not wait till the blood was thus poisoned?

Dr. Shaver—I am simply answering on the case stated me by Mr. Cameron. The rule in surgery is to save all the important parts possible. It is of great importance to amputate below rather than above the elbow where it is possible, as an artificial limb might be attached. (The bone amputated was here produced, and handed to the Doctor). The bone was not injured at the elbow. The saw should have cut the bone square, and not on a slant, as appears by the bone produced.

Cross-examined—It would make a great deal of difference which muscle was torn away. If torn away from its origin, it would have a tendency to produce a great deal of inflammatory action. There might not be much hæmorrhage. The effect of tearing away a muscle must be to injure all, as they have a common origin; but there is a good deal of difference as to whether the muscle was on the posterior or anterior side of the arm: and which it was has not been stated. The rule is to save as much as you can, and amputate above the seat of the injury. If there was swelling of the arm, there might be rupture of the brachial artery. If injury had been done internally, I am of opinion that it might be seen externally.

Dr. Canniff—I practice in Toronto. I have heard the evidence today. From anything I have heard, I do not think it was necessary to have amputated the arm above the elbow.

Cross-examined—It is quite possible the vessels may have been injured, and the surgeon attending must be the judge whether amputation is necessary or not in such a case.

Dr. King—I practice in Toronto. I have heard the description of the girl's injury. In the first place the evidence is so extraordinary that I cannot judge whether it was necessary to operate above the elbow or not, because I cannot even discover whether the tendons injured were the flexors or extensors. In the next place, if the muscle was completely torn away, which is an extraordinary thing to happen, there ought to be some appearance of it. I could give no opinion about the necessity of taking off the limb in this case without seeing it. If the amputation, supposing it necessary, was made, it would not make any great difference whether it was an inch above or an inch below. As to the small spicula attached to the bone produced, that resulted from the assistant not holding the limb firm. I cannot tell what muscles were torn away. For a physician to remember all that Dr. Hill has said, and yet forget whether the muscle was a flexor or extensor, is most extraordinary.

Cross-examined—If I had a case in which I was of opinion that sloughing would occur, I should use my own discretion whether I took the limb off above or below, even if advised contrary to that opinion by half a dozen doctors.

Norris Black—I make artificial limbs. It is a great advantage to have an amputation below the elbow, as I know of no successful invention of an artificial elbow joint. There is also some little utility in a finger and thumb preserved. There is no invention as far as my knowledge goes which would be of value to this girl.

Dr. Lawlor—I practice in Toronto and have heard most of Dr. Hill's evidence. I should say that in a case such as described, it was not necessary to amputate above the elbow. There is important evidence wanting to enable me to judge whether the amputation was proper or not. The bone is not sawn straight through, but the little projection on it is caused by the assistant not holding the limb firmly.

Cross-examined—There must have been several tendons injured. The hurt to the hand was evidently very extensive. If possible I should try to save the finger and thumb; but if necessary, in my judgment, I should certainly have operated as has been done. Suppose the forearm much injured, I should have felt it my duty to amputate at the elbow joint, though if there was no means of getting a flap, I should have gone above.

Dr. Buchanan—I practice in Toronto. If there was no sufficient injury above the wrist joint, I would try to save the finger and thumb.

Cross-examined—But if there was an injury to the other structures, amputation of the arm might be necessary.

Mr. M. C. Cameron—That is the case, my Lord.

Mr. J. H. Cameron—I submit there is no case made out. We can be responsible only in case of neglect, and no neglect has been proved in this case.

The learned Judge—The case must go to the jury.

Gideon Smith—We were thrashing oats at the time of accident. Something went wrong, and I went out to fix it. A sheaf was put in, and shortly after, hearing a scream, I went in, and saw the girl holding her arm up. I then saw she had lost her hand. I saw the bones lying on the barn floor. There were some long, middling-sized strings attached to the fingers on the floor. I did not count how many there were. Mr. Jackson told me the doctor said if the arm was taken off below the elbow it might cause inflammation and the girl might die.

Joseph Lorenger—I remember the day of the accident. My wife and I went to Jackson's before any doctor was there. I staid all night, and saw Dr. Hyde. I heard Jackson ask if Dr. Hyde could leave the finger on. Dr. Hyde said he could not do it—there was too much danger. As far as I recollect, the thumb was on and the little finger hanging by the skin. Dr. Flynn came first, but he would do nothing till Dr. Hyde

came, and Dr. Hyde would do nothing till daylight. Jackson asked me what I would do. I said I would have it taken off as quickly as I could and above the injury. Jackson then told Dr. Hyde to do the best he could for the child. The arm was swollen; but I cannot remember how far up. I saw strings attached to the fingers brought in from the barn. I cannot say how long the strings were, or how many of them there were. The girl lay in bed all night. I did not see the finger and thumb move at all.

Cross-examined—When I went to the house, the girl was lying on the bed. I do not know whether she had her clothes on. She was covered up. I did not compare the arms to see if one arm was thicker than the other.

Mary Lozenger—I am wife of last witness, and was at Jackson's house the night of the accident. I did not see the hand till Dr. Hyde opened it between 10 and 11 at night. It was bloody. The middle fingers were drawn out. I think the forefinger was away also. I saw strings attached to the fingers torn away. They were pretty long. I do not remember about the swelling. The girl did not appear faint and nervous from the shock. I saw the bone of the arm sticking out.

John Gibson—I saw Jackson some few days after the accident. I staid all night at his house, and I understood from him all the fingers were taken off, but the thumb and one finger were attached to some skin. Dr. Flynn, he said, would not operate. He also said the tendons and muscles were drawn out from the arm. Jackson said likewise that the arm was swollen.

Dr. Aikins—I practice in Toronto. (Counsel stated the nature of Dr. Hill's testimony to witness.) No well-informed surgeon would like to place himself in the position of saying whether on the evidence the operation ought to have been above or below the elbow joint. If the muscle is torn away from its origin, it would implicate a number of muscles, and some veins and nerves. It is impossible to say what ought to have been done without seeing the case. (Witness here gave cases in point, showing that double amputation had been necessary in more than one instance, in consequence of the injuries extending further than at first supposed.) Any one who looks at the bones will see at a glance that the finger and thumb could not have been saved. (Explained this by reference to skeleton of a hand.) Had they been left, on the lowest possibility a second amputation would be necessary above the wrist, owing to inflammation. No good surgeon would have attempted to save these members. The surgeon would try by the forceps whether the tendons were loose or not, and he alone could be the judge. As to the manner of the sawing of the bone, it is a matter of no consequence whatever.

Cross-examined—Had a mass of skin been taken off the forearm without fracture, I would have endeavoured to save the limb. I never saw a case where some fingers were dragged out by traction, and the remaining fingers saved. Inflammation would be almost certain to occur. (Mr. M. C. Cameron here quoted a case from the *Lancet*.) It might be an accident to cut the bone crooked. It is a thing which happens to any surgeon. No medical man would take that bone up, and infer it was amputated by an unskillful hand. If a tendon simply five inches long were pulled out, I would not infer from that that it was necessary to amputate above the elbow. I know of one or two lives having been lost by waiting till gangrene set in before determining the necessity of amputating. I think any surgeon who risks the life of a patient by waiting till gangrene sets in before amputating ought to be prosecuted. I could not possibly say there was malpractice on the part of Dr. Hyde in this case.

Dr. Wright—I practice in Toronto. Having heard all the testimony I cannot say there was any malpractice in amputating in this case above the elbow. The injuries were extensive, and likely to be much more extensive than any one would suppose from the external appearances. He gave an instance where a second amputation was required in a case in which previously they had cut too low, not being able to see from the external appearance the nature of the internal injuries which afterwards presented themselves. The surgeon alone could judge in this case of the necessity of amputating above the elbow.

Cross-examined—The surgeon himself being the best judge, there never ought to be a case of malpractice brought against the profession. (Laughter.)

Dr. Winstanley—From the evidence to-day, I should say decidedly not—there was no malpractice in this case. I had a case where the patient died from the amputation being made too low, although at the time there was no external appearance of the muscles being injured higher up.

Dr. George Smith, of Stratford—I have been house surgeon to the Hospital of the London University. From the evidence I have heard, I do not think Dr. Hyde was guilty of malpractice under the circumstances. In my judgment, the injuries justified the course taken.

Cross-examined—The injuries I refer to are such as the crushing of bones and the lacerating of the muscles. In all these cases there is danger of sloughing and gangrene. It is a rule to save as much of the limb as possible. Surgeons differ on the point as to whether you may wait till you see if there is danger of gangrene before so amputating as to prevent the risk of gangrene.

Dr. Richardson—This is one of those cases in which two men of eminence might entertain very different opinions. If called in a case of this kind, and the surgeon told me he thought it necessary to go above the elbow joint, I could not pronounce that he had done wrong. The doctor here gave a case of his own where the patient appeared to be in peril from his endeavouring to save too much. I think in general conservative surgery is carried too far. Attempts have been made to save the limb, to the danger of the life. I think in this case the injuries must have been very severe indeed. Owing to the fact, as stated by Dr. Hill, that the end of the ulna was exposed, it is clear to my mind that the ulna artery, nerve and veins must have been torn away, and I should judge also from *that* fact there was serious danger to the limb from the low vitality of the parts thereby produced.

Cross-examined—The rule is to try to save as much of the limb as possible. The tearing out of the muscle at its origin, as stated by Dr Hill, would be one ground to justify amputation above the elbow. It would have been unsafe to wait to see if there was danger of gangrene before amputating. I would not attach much importance to the opinion of Dr. Hill, after his statement that he thought the finger and thumb ought to have been saved.

Dr. Bovell—I practice in Toronto. I have heard the evidence, and consider Dr. Hyde not guilty of malpractice. I cannot believe any capable man would have operated above the elbow, unless he saw there was a cause for it.

Mr. Harrison—I suppose many limbs have been cut off which might have been saved.

Witness—Very likely. It is an Irish question and an Irish answer. (Laughter.) I rest my opinion that amputation above the elbow was necessary on account of the tearing out of the muscles and the injury to the fleshy parts. You cannot conceive of any case of a tendon being pulled away from its origin, wherein it is safe to do anything but amputate above.

Dr. Philbrick called. (Witness is very deaf.)

Mr. J. H. Cameron—Have you been in Court during the trial?

Witness—I have, but I can't hear anything. (Laughter.)

Mr. Cameron explained the nature of the evidence given.

Witness (in a loud voice.)—Had I received the injury described, I would have insisted on having my arm cut off above the elbow joint. (Loud laughter.)

Mr. J. H. Cameron—Pretty conclusive evidence. I will not ask you another question after that. This is the case for the defendant, my Lord.

Mr. Cameron then addressed the jury for the defendant. The defendant, he said, was sued on what was technically called an action for negligence, and the only ground on which the plaintiff could succeed was that the professional treatment of the defendant had been unskilful, and therefore, so negligent in that sense of the term that had it not been for such unskillfulness the plaintiff would not have sustained injuries which she was alleged to have sustained through want of skill. No professional man could ensure success, be he an attorney or a doctor. All that could reasonably be asked of a medical man was that he should exercise his knowledge and skill to the best of his ability, and that there should be a reasonable degree of knowledge and skill. There was an old adage that doctors differ; but in this case all the differences were between the doctors called for the plaintiff, while the distinguished doctors called for the defendant all agreed. As to the question of the want of skill, he contended that the treatment was proper, not only on the judgment of the defendant, but on that of some of the most eminent practitioners in the country, who had been called for the defendant. Why was it that the action had not been brought until nearly six years after the accident? Probably it was thought the circumstances would have been forgotten; and that the plaintiff might thereby have a chance of success. But fortunately the facts were remembered with great distinctness, and the nature of the injuries had been so well described as to show the necessity of the operation which had taken place. Supposing that amputation had not been performed, and the girl had lost her life instead of her arm, then the responsibility resting on Dr. Hyde would have indeed been such as to entitle her to damages. Dr. Hyde had practiced in the section of the country in which he resided for a number of years, and he had there a great name and reputation. There was no one there who supposed that he was unable to discharge his duty properly and skillfully, and that he had done so in this case was proved by the host of eminent surgeons who had been examined in court to-day. In no case had he ever seen so large an array of practitioners coming so readily forward to declare that the operation had been properly performed, and that the plaintiff was not only not entitled to damages, but that there was not a single stain of a want of skill resting on the reputation of Dr. Hyde.

Mr. M. C. Cameron said that, knowing doctors had arduous duties sometimes to discharge, he trusted nothing he might say would bear with undue weight against the defendant. He quite agreed with his learned friend, that if a surgeon with a fair amount of skill exercised his judgment fairly and honestly he ought not to be visited with consequences. The time elapsing between the period of the accident and the

present had arisen in consequence of Mr. Norris Black advising that the girl should attain her growth before he saw whether it was possible to make her an artificial arm. He contended from the evidence that an attempt ought to have been made to save the finger and thumb, or at all events the forearm, and argued from the amputation taking place above the elbow, that due forethought and skill had not been exercised. He submitted that there should be less hesitation now than formerly to perform a second amputation, if there was a reasonable chance of making the limb serviceable by first cutting low down, owing to chloroform saving the shock to the system and removing altogether the sense of pain and suffering. He believed that the amputation had been made above the elbow because it was an easier operation than to operate below, where there were two bones instead of one, as above.

The learned Judge, in summing up, said all that could be required of a professional man was a fair and reasonable amount of skill. Owing to the lapse of time, there was some difficulty, and even Dr. Hill could not give a full account of the transactions, for that reason. All the medical men concluded that amputation was necessary, and the only question was whether it was wrong to cut so high up. The jury had to say whether they were satisfied the treatment in cutting above the elbow joint was of such character as to be unskillful, and on this point they must consider that no evidence was brought forward to show the defendant was unskilful, except it might be so inferred from this case, and many of the most eminent medical men in the Province gave it as their opinion that he had acted skillfully, and that any other course might have endangered life. If they found for the plaintiff, they had to say what the amount of damages should be—determining the extent of the injury she had sustained by the cutting being above instead of below.

Mr. J. H. Cameron desired the learned Judge to note he objected that his Lordship should have told the Jury there was no evidence of negligence, and if they had any doubt as to the alleged want of skill, they should give the defendant the benefit of it.

The jury then retired, and shortly after returned a verdict for plaintiff and $250 damages.—*Stratford Paper.*

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Severe Incised Wound of Liver: Recovery.* By HAMNET HILL, M.R.C.S., Eng.

William Perkins, aged fifteen, on the 4th July, 1868, whilst working in one of the large saw-mills at the Chaudière Falls, on the Ottawa River, was overbalanced by the accidental thrust of a truck cart, and thrown right side forward on to a circular butting saw of about sixteen inches diameter and making 1500 revolutions per minute. His right arm was instantaneously cut off about two inches above the elbow. One of the mill hands seeing the boy's danger, seized hold of him while in the act of falling, in the vain endeavour to save him, but not before the saw had inflicted a frightful wound in the lower part of the right side of the chest, of about nine inches in length, cutting completely through the 8th, 9th, 10th, and 11th ribs, laying open the cavity of the pleura (without, however, wounding the lung), thence finding its way through the diaphragm into the cavity of the abdomen, and finally wounding the convex surface of the liver to the extent of about four inches superficially, and to the depth of about one inch at the deepest part, as measured on the periphery of the saw; the escape from instant death was perfectly miraculous, as the cicatrix remaining on the skin shows that the saw went within half an inch of the medium line posteriorly, on the spine, and to within about two and a half inches of the median line on the sternum anteriorly. I was in attendance on the boy about thirty minutes after receipt of the injury and found him as described. Air was rushing in and out of the cavity of the pleura, during each attempt at respiration, through the wound in the side, which was gaping about three inches wide at its middle and was partially dammed or plugged up as it were by the bright and glistening substance of the liver, exhibiting the incision in its surface. There had been a large amount of hæmorrhage, as seen by the saturation of the clothing, and by the exsanguined aspect of

the patient, but at this moment there was little if any bleeding going on either from the stump or the side. Without loss of time I returned the liver from between the edges of the wound well into the abdominal cavity, and closed it up as expeditiously as possible by means of fourteen stitches isinglass plaster, compress and bandage, which gave so much relief that he immediately exclaimed "Now I can breathe." It was found necessary to re-amputate the arm higher up to get integument to cover the end of the humerus. On attempting to put him to bed with the wounded side of course uppermost, so intense was the agony by disturbance of the injured parts that the only endurable position was found to be the semi-erect or sitting posture on the nates with the body at an inclined plane of about forty-five degrees. Considering the gravity of these injuries, the exhaustion and shock were not so great as might have been expected. He was ordered Tinct. Opii. gtt. xxx. immediately, and gtt. xv. every two hours if awake, wine and water "ad libitum;" at the night visit reaction was fairly established; natural heat was restored; there was no faintness, consequently no internal hæmorrhage could be going on, and he expressed himself as suffering but little pain.

July 5th.—Surprisingly well; an almost entire absence of fever; no pain except that induced by any effort to move or change position; had slept considerably; no cough or bloody expectoration; respirations about forty-two; pulse one hundred and twenty; cheerful voice and countenance; no jaundice; continued opiates and wine, and enjoined most perfect quietude, restricting the talking to necessary requests only, and that to be done in whispers. A daily record of the case is unnecessary; cold water dressing was applied constantly to the side and stump, bowels were opened occasionally, but not too often by means of enemata, and the frequent exhibition of opiates gradually discontinned as the respirations and pulse became lessened in frequency. Secondary hœmorrhage came on from the stump on the eighth day, which was arrested by immersion in ice, and the side was dressed with much difficulty from changing his position for the first time about this date; I was surprised to find how much union by first intention had taken place (a very unusual circumstance after saw-cuts); many of the stitches were removed; I dressed the side every third day thence after, and each time found a very marked improvement; so painful, however, was change of posture that it was fully four weeks before decubitus could be borne, which thus permitted of the daily cleansing and attention to the wound in the side, so that by the end of the seventh week he was enabled to walk about, as it was almost entirely healed. Several small pieces of bone came away in the dressings, evidently "saw-shavings" from the ribs; these latter have not united by

bony union, so that they are in reality "floating ribs," but respiration is perfectly natural, and all the functions of the thoracic and abdominal viscera are well and efficiently performed. Within the limits of a tolerably extensive practice, the above is the first case I have met with of such extensive injury of the liver, and I look upon it as unique in at least two particulars, first when we consider the extent of the penetrating wound into the chest, abdomen and liver, without immediate destruction of life, and secondly in its remarkable termination in perfect recovery without a single bad symptom supervening from receipt of injury to date of convalescence; the fatality which usually follows injuries, at all approaching this one in severity is of course very great, the chief danger to the patient, should he indeed survive the immediate loss of blood and shock of injury, being from inflammation set up in the serous membranes; medical literature, except as refers more particularly to military surgery, records but few instances of such severe injury either for instruction or for comment, which is doubtless owing to the infrequency of such accidents; there is every reason to believe, however, that penetrating wounds of the abdomen are much complicated, and that the severity of their danger is much increased by lesion of either the solid or hollow viscera; and from the reports of various cases of wounds of the liver, spleen &c., these latter appear to have been more fatal than similar lesions of stomach and large or small intestines. According to the experience of Dr. Hennen "a deep wound of the liver is as fatal as if the heart itself were engaged though slighter injuries are recoverable," other authorities, Druitt especially, refer also to the fatality of such injuries in almost the same terms. I must confess that the prognosis of the above case was of the most unfavourable nature and I looked forward to no other result than its fatal termination in thirty-six or forty-eight hours from the combined accession of pleuritis, peritonitis and possibly hepatitis. Considering that the serous membranes must have suffered a "solution of continuity" to extent of twenty lineal inches at least, it is indeed most surprising that nothing but adhesive inflammatory action was set up, which was indeed highly necessary for reparation; the non-occurrence of more severe inflammatory syptoms may be not unreasonably traced to the very large amount of blood that had been lost from the wounded side and stump. The detail of the case would also point favourably to the very decided use of opium in similar accidents, which can hardly be given in too large or too frequent doses—a system of practice much extolled by all military authors, from Hennen, Thompson, Cooper, Larrey, &c., down to more recent writers on military surgery in Europe and in the United States.

City of Ottawa, December 21st, 1868.

*Case of complete Extirpation of the Tongue, for Epithelial Cancer* with clinical remarks. By GEORGE E. FENWICK, M.D., Prof. Clinical Surgery, McGill University; Reported by GEORGE ROSS, A.M., M.D., House Surgeon, Montreal General Hospital.

A——R—— aged forty-five, was admitted into the Montreal General Hospital, under the care of Dr. George E. Fenwick, on the 18th Nov., 1868, suffering from cancerous disease of the tongue. He is a man of rather full habit and generous mode of life. He has been accustomed to smoke a pipe for many years, but says that he always held the pipe on the *right* side of his mouth, whereas it is the *left* side of the tongue which is diseased. He has always enjoyed excellent health until the commencement of this affection, and there is no history whatever of cancer in the family.

His notice was first attracted to the tongue, in the month of November, 1867, when a small flat warty excrescence was found on the left side of that organ, and about midway between its base and apex. This excrescence was ligatured in January, 1868, by Dr. Grant of Ottawa, having in the meantime increased considerably in size. The base which was left, however, always remained sore and ulcerated, and has continued steadily, though very gradually, to increase in extent from that time until the present. On two occasions profuse hæmorrhage occured, which was arrested by the use of the per-chloride of iron: this left him in a very weak and depressed state and being anxious to be rid of his malady he determined to seek other advice, and came to Montreal accompanied by his surgeon, Dr. Bell, of Ottawa.

His present condition is as follows: An ulcer is situated on the left side of the tongue; it extends from within three lines of the apex of the organ, getting gradually wider as it proceeds backwards, to within $\frac{3}{4}$ of an inch of its extreme base; thus involving a triangular surface of about $1\frac{1}{2}$ inch in length, by $\frac{3}{4}$ of an inch in width. The surface of the ulcer is unhealthy looking, devoid of granulation, and exudes a copious acrid, thin, very fœtid fluid. The margins are raised and extremely firm; nearly cartilaginous. No nodules can be felt in any other part of the tongue, the remainder of the mass seeming soft and healthy. Immediately beneath the ulcer on the floor of the mouth, there is a small spot of the mucous membrane which seems to have taken on the diseased action, as there is here a superficial ulceration, which has obstinately refused to heal. The submaxillary and sublingual glands seem to be quite unaffected, no hardness or change of any kind in them being perceptible.

Since removal of the original outgrowth, the treatment has consisted simply in palliation by means of disinfectants such as washes of carbolic acid, etc.

The disease was diagnosed by Dr. Fenwick, as *Epithelioma*, and a rather favourable prognosis, in case of operation, consequently given.

The Doctor decided to remove the *whole* tongue at once, rather than increase the risk of recurrence by leaving some portion behind, which might possibly be already involved. Dr. Campbell, Professor of Surgery, McGill University, who was consulted, was also of opinion that complete eradication was advisable.

Accordingly on Friday, the 20th November, the patient having been put under the influence of chloroform, the operation was performed by Dr. Fenwick, assisted by Drs. Campbell and Bell, (of Ottawa). The steps of the procedure were as follow:

An incision, about one inch in length, was made below the chin, exactly in the mesian line, through skin, fascia and muscle, down to the floor of the mouth; a very long curved needle in a handle was then passed through this into the mouth emerging to the right of the frænum linguæ and close to the root of the tongue—this needle carried a strong thread to which was attached the chain of the écraseur. The chain of the écraseur thus introduced into the mouth was passed completely round the base of the tongue, being pressed back as far as possible by Dr. Campbell. The tongue was then transfixed by a strong cord and drawn well forward out of the mouth. The instrument was locked, and constriction immediately commenced. Fifteen seconds was allowed to elapse between each click and at the end of nine minutes and thirty seconds, the separation was found to be complete. The organ was then removed from the mouth by the attached cord and the operation was finished. The bleeding throughout was very slight indeed. On examination of the tongue it seems as if all the parts cut through were quite healthy.

He was put to bed and kept supplied constantly with small pieces of ice in the mouth. By 10 p.m., whatever oozing there had been during the day had entirely ceased.

Saturday, 21st Nov.—No bleeding, but profuse secretion of tough mucus, which is troublesome, requiring to be constantly removed with a swab for the purpose. Swallows freely but with some little hesitation. Pulse 100. Quite cheerful. Ordered.

℞. Potass. Chlorat. ʒ ii.
Aquæ Oi.
Ft. Gargarisma.

To be fed on beef-juice, brandy and water, and milk.

25th Nov.—The wound looks exceedingly healthy, granulating nicely.

He sat up to-day—can articulate many words distinctly. To use a piece of lint soaked in the following wash as a dressing to the sore.

℞. Acid Carbolic ʒ ii.
Aquæ Oi.

1st Dec.—Leaves the Hospital to day. He can now readily swallow such food as soft boiled eggs, etc. He can articulate wonderfully well, being readily understood in almost anything he says. The wound has nearly all cicatrised over. He started that same evening for Ottawa, having to travel by rail a distance of about 190 miles. He bore the journey surprisingly well, arriving at his home the following day 2nd December, at eleven a.m.

Clinical Remarks.—The operation as here described differs in some minor points from that performed by Mr. Nunneley. Mr. Nunneley transfixes the floor of the mouth midway between the symphysis and hyoid bone, by means of a curved needle, carrying at once into the mouth a wire rope doubled; in the operation as performed by myself, not having a wire rope, and time not permitting to procure one elsewhere, I determined to use the ordinary chain of the *écraseur;* in doing so I felt convinced that the opening beneath the chin would have to be enlarged. An incision was made through the skin and fascia extending downwards from the lower margin of the symphysis to within a line or two of the body of the hyoid bone. The genio hyoid and mylo hyoidei muscles were separated with the point of the finger; having arrived at the mucous lining of the floor of the mouth I transfixed it with a curved needle to the right of the frænum and close to the base of the tongue. The needle carried a strong thread to which was attached the middle of the chain of the écraseur, so that the chain was introduced into the mouth double: Dr. Campbell, who kindly assisted me, then slipped the tongue through the loop of the chain, forcing it to the back of the organ, and its substance was transfixed with a piece of strong whip cord, by which he drew it forcibly out of the mouth and a little upwards. I now found that on raising the handle of the instrument the chain was thrown forcibly backwards in the very position which was desired. Having first satisfied myself that it was free of the epiglottis, I dre it sufficiently tight to strangulate the organ, and then proceeded to draw in the chain allowing fifteen seconds between each click of the instrument, being timed by Dr. MacCallum.

Mr. Nunneley uses a strong wire rope, and to prevent its slipping forward, transfixes the base of the tongue with two or three strong pins the points of which are made to protrude on the upper surface of the organ in front of the rope. In this case I was enabled to dispense with

the pins as the chain was sufficiently stiff and unyielding to prevent its displacement forward.

The advantages of this mode of operating over that selected by Mr. Syme, and also that of Professor Regnoli, will be sufficiently obvious. The operation of Mr Syme, as compared with the above, is of far greater magnitude and must be attended by greater risk or at any rate followed by greater shock. The operation of Regnoli, as described by Mr. Sampson Gamgee, and which he recently performed (vide *Lancet*, Nov. 14th, 1868,) appears to me to be objectionable on several grounds. The time consumed in the operation is considerable, and although the interval between the tightening of the instruments (two écraseurs were used) varied from half a minute to one minute, yet the severance of the organ was attended by alarming hæmorrhage. In speaking of the operation Mr. Gamgee remarks, "with the incision for the submental aperture according to Regnoli's directions, I am quite satisfied, for they fulfil the great indications of giving plenty of room without. Involving considerable vessels or important structures; they permit of the safe administration of chloroform throughout the operation, bringing into view the whole extent of the disease, and place under command the possible sources of hæmorrhage." The extensive muscular detachment is a serious objection to this method of operating as it must to a certain extent interfere with the process of deglutition. The success of an operation very frequently depends on the amount of nutriment you can get your patient to swallow, and as a general rule the rectum is a poor substitute for the stomach. More especially is this the case in a person who has never suffered deprivation of food taken in the natural way, so that having to depend on the back entrance for supply, after a large loss of blood for at least forty-eight hours is placing the patient in a very unfavourable position.

With regard to the vessels involved, they are the same in either case, but placed under very different conditions. By dividing the floor of the mouth and drawing the tongue downwards beneath the chin, it appears to me that the vessels would be sliced obliquely, and the risk of hæmorrhage would be increased, whereas if the tongue is drawn out of the mouth, and its point directed upwards, the vessels would be divided across transversely and the chances of bleeding be very much less, but whether this be the correct interpretation or not, certain it is that in Mr. Gamgee's case the hæmorrhage was extreme, whereas in the case here reported, it did not amount to the loss of a single ounce.

With regard to the safe use of chloroform the operation as here described, did not in any way interfere with its administration, for the patient was placed under the influence of the anæsthetic, before a single

step of the operation was taken, and its action was kept up with facility throughout. I cannot see in what respect the safe administration of chloroform is secured by the operation of Regnoli.

The whole extent of the disease is brought into view as well through the mouth, as by an artificial opening beneath the chin. And with regard to more room being afforded to the operator, it is questionable if there is as much as through the natural opening. The results of this operation so far are most flattering. The patient never suffered from a single bad symptom, and he bore the journey to Ottawa on the eleventh day after the operation without fatigue.

Since writing the above I have heard from my patient through Dr. Bell, of Ottawa. The tongue has entirely healed, he is able to swallow solids, and his speech daily improves. His general health is very good, but on the right side of the neck the sub-maxillary glands have become swollen and inflamed. This is attributed by his surgeon to cold which followed after a drive into the country, but appropriate means are being adopted, and it is hoped that it will gradually subside. I shall give on another occasion a further report of the case.

Montreal, January, 1869.

*Note.*—We give in the Periscopic Department, the report of Mr. Gamgee's case, taken from the *Lancet*.

## REVIEWS AND NOTICES OF BOOKS.

*A Theoretical and Practical Treatise on Midwifery including Diseases of Pregnancy and Parturition.* By P. Cazeaux, Member of the Imperial Academy of Medicine, Professor in the Faculty of Medicine, Paris, &c., &c., &c. Revised and annotated by S. Tarnier, adjunct Professor in the Faculty of Medicine of Paris, &c. Fifth American, from the seventh French Edition. By W. R. Bullock, M.D. With one hundred and seventy-five illustrations. Royal 8vo., p. 1124. Philadelphia: Lindsay & Blakiston, 1868.

The work of Cazeaux, on the subject of obstetrics has long deservedly held the foremost rank as a text book or book of reference. The present edition is a translation by Dr. Bullock, of the revised and annotated edition of Professor Tarnier, who undertook the task of editing this work, after the death of Cazeaux. This is the seventh edition of the work, which circumstance alone would speak well for its general appreciation, if indeed we neglected to observe that this work has been adopted by the superior council of Public Instruction in Paris, as holding the

first rank as a classical work, and placed for the use of students in the Matérnité Hospital, Paris. In the preface, Mr. Tarnier observes:

"A classical book soon grows old in these days, and it was found impossible to bring out a new edition without subjecting it to the alterations demanded by the progress of science. I was charged with its preparation, and accepted the honour of the task with a full appreciation of its difficulties. I had never been Cazeaux's pupil, but his book was the first from which I had studied obstetrics, and I had been accustomed to see it in the hands of all my fellow-students, and, at a later period, of my pupils also. Independently. therefore, of my personal observation, I was in a position to become acquainted with its character through others. Thus, together with merited praise, I sometimes also listened to criticisms of its details, and profited by all I heard.

"I was left at liberty to remodel the work according to my judgment, to make the alterations which seemed to be required, to suppress some passages and to introduce new ones. Out of respect to Cazeaux's memory it was decided that the printing should be done in two kinds of type; the larger for the old text, and the smaller for what I had myself written.

"The reader will readily distinguish what belongs to Cazeaux and what to myself, but the work has been resolved into a homogeneous body without contradictory annotations. This last result could not possibly have been attained without retouching the old text, by which a new direction and meaning has been sometimes given to the original ideas. Should it be desired to know certainly what Cazeaux's opinions were, it will, therefore, be necessary to consult an old edition.

"Especially have I made it a duty not to change the spirit in which the work had been conceived; therefore I can say with Cazeaux, that, 'After a work has passed through several editions, a preface is hardly needed, for its object is then sufficiently well known. The present is more particularly intended for the use of students of medicine and midwife-students, although general practitioners may also, perhaps, gain something by its perusal, for I have endeavoured to make it a condensed summary of the leading principles established by the masters of our art, and for that purpose have drawn from all the works published down to the present day. My position in the lying-in hospitals has enabled me to test the value of the doctrines put forth by former authors; and I have adopted as true all which my daily experience has confirmed, and have rejected unhesitatingly, from whatever source they came, all such as were disproved by the numerous cases brought under my observation, confining myself to quoting, without comment, those whose value I have been unable to determine."

The plan of this work has been remodeled, so that it may be regarded as altogether new. The chapters are grouped into eight parts. In the first part are considered the female generative organs. in which will be found not only a minute description of the female organs concerned in the generative act, but also the physiology of these parts. In the next section are considered the various changes, which occur throughout the pregnant state. The perusal of this section will repay any man; written in clear and lucid language, it will be found to contain all that is known of those wonderful changes which occur from the moment of conception up to the birth of the offspring. In part three, is discussed the subject of natural labour, and we notice that the author devotes much space in pointing out the duties of a practitioner to careful attention to both mother and child. These are minor points, or at least considered as such, and seldom touched upon in works on obstetrics. In part four is considered the Pathology of Pregnancy. In this section will be found a full description of the various lesions to which the pregnant woman is liable.

Under the general heading, Dystocia, will be found in part five, a full description of the various complications which render labour difficult, or which delay the passage of the child into the outer world. In part six, will be found two chapters on the influence of ergot on the child and mother; also, a chapter on the effect of bleeding and debilitating regimen on the development of the child.

Part seven, contains a full and perfect description of the various surgical operations which the obstetrician is sometimes called upon to perform; and, in part eight, will be found some excellent hints on the hygiene of children, from birth to the period of weaning.

We cannot close this notice, without giving full credit to the publishers, who have done their part in the highest style of art. The type is clear, and the paper superior. The engravings are very well executed. It would be fulsome to say more in praise of this edition of this standard work, save alone to recommend it highly to all who desire a good practical guide—and an interesting work for a leisure moment.

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*The Laryngoscope in Diseases of the Throat; with a chapter on Rihnoscopy. A manual for the Student and Practitioner.* By Sir George Duncan Gibb, Bart., M.D., L.L.D., Assistant-Physician and Lecturer on Forensic Medicine, Westminster Hospital. Third Edition, pp. 158. London: Churchill & Sons, 1868.

The Laryngoscope in diseases of the throat has become of such general use that no practical man can be without it. Sir Duncan Gibb has

devoted much of his attention during the last five years to the subject of throat diseases. He was the first man in England who instituted investigations into the use of the Laryngral mirror, and followed up the subject with assiduity. The result of his labours was the production of a manual on throat diseases which was well received by the profession at the time, since then he has produced the present *brochure* which is in every way worthy of its author, and has done much to call public attention to the use of the Laryngoscope, so that it has become at the present day a necessity in the hands of the practitioner. For this alone he deserves the thanks, if not the support of his fellow workers in the field of science. Being personally acquainted with the worthy Baronet and knowing his habits of industry and system, we were much disappointed at seeing so little change in this the third edition of his work on the Laryngoscope; as we feel convinced there are many practical hints with which any worker with that instrument must become familiar and which would be advantageously embodied in the work before us. Knowing full well the limited time that a practical man has at his disposal, we can make every allowance for this neglect, if so harsh a term can be with justice applied, for we regard this third edition as quite up to the times, and as offering to the physician a good practical guide to the employment of this very useful instrument in affections of the throat. We notice in the preface that the author says "the time has been so short since the publication of the second edition—a little over a year—that it has afforded scarcely any opportunity for the introduction of additional matter into the present edition, bearing upon the subject of which the volume professes to treat." We think the author would have rendered the book more attractive had there been embodied in it a few illustrative cases which are always well received and of which we feel certain he has an abundant supply. We can confidently recommend this book to the practitioner and student as a safe guide to the use of the Laryngoscope.

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## PERISCOPIC DEPARTMENT.

### Surgery.

#### ON REMOVAL OF THE ENTIRE TONGUE.

By Sampson Gamgee. F.R.S. (Edin.), Surgeon to the Queen's Hospital, Birmingham.

Little more than twenty years have elapsed since a surgeon so bold and skilful as Mr. Liston spoke and wrote of ovariotomists as "belly-

rippers," who deserves to be criminally indicted whenever they again attempted the operation of ovarian extraction; which he regarded as a hopeless, nay barbarous, procedure. On the experience of several hundred cases, ovariotomy is now established as one of the most legitimate operations of surgery.

Removal of the entire tongue for cancer has been frequently attempted, and several times accomplished; but the result has been so generally unfortunate, that Mr. Gross can scarcely be said to have exaggerated the verdict of judicious surgeons when he concluded a brief survey of methods for the removal of the tongue with these words:—I have certainly not alluded to this operation with a view of recommending its adoption; on the contrary, it cannot be too strongly condemned. If there is any operation in surgery that deserves to be stigmatised as cruel and unnecessary, it is this."*

With this opinion before me, supported as it was by such experience as Mr. Syme's, I did not, as I do not still, accept as conclusive the evidence on which the great majority of surgeons condemn removal of the entire tongue as an unjustifiable operation; I deem their reasons insufficient, since the researches on which they are based, pathologically and bibliographically, are scanty, superficial, and inadequate. As a rule, matters are little studied which do not offer a prospect of speedy profitable return. When ovariotomists were, in the graphic language of Mr. Liston, styled "belly-rippers," the anatomy, diagnosis, and clinical history of ovarian disease were little studied: for the prospect had no allurements.

Without further introduction, I shall condense from the copious notes of our resident surgeon, my friend Dr. Robert Jolly, the history of a case in which I lately removed the tongue—with no better result, I hasten to avow, than most of my predecessors; but, I hope the event may prove with this difference: that the case will become the starting point and basis of an inquiry which may, at no distant date, result in a definitive settlement, after comprehensive inquiry, of the merits and demerits of the different methods of removing the tongue, wholly or in part.

*History of case.*—Henry S.——, aged fifty two, a labourer, was admitted into the Queen's Hospital, from Stratford-on-Avon, on the 25th of August last. The patient, a spare-built but florid-looking man, was married, and the father of seven living children. He had always enjoyed excellent health up to twelve months last past, when he began to experience shooting pains in the ear and down the neck. Shortly afterwards his tongue became sore, and on examining it he found a small, well-defined, roundish lump with ulcerated surface, on the left side of the tongue. It has continued to extend ever since, and has occasioned great

pain and difficulty in swallowing. About three months after its first appearance he applied to a medical man, who extracted two sound teeth in the lower jaw because they hurt the tongue. Five months later (four months before admission) the disease began to spread with considerable rapidity, and bled very much. When first seen by me, the patient had a deep excavated ulcer, of oval shape, involving the anterior two-thirds of the left side of the tongue. The edges of the ulcer were thick, raised, everted, and irregularly notched; its floor was foul, and studded with pea-shaped, tuberous granulations, discharging a thin, ichorous fluid. There was great fetor of breath, and profuse salivation. No implication of structures at the floor of the mouth, or apparently of neighbouring glands. General health much impaired, in consequence of inability to take solid food.

A great variety of means were employed with a view to improve the general health and the character of the ulcer, but as they all failed, I operated on the 3rd of October. The patient having been previously shaved, was placed upon a table, and rendered completely insensible with chloroform administered by Mr. Snow and Dr. James Hinds. The shoulders being raised and the head well thrown back, standing on the right side of the patient I made a semilunar incision along the base of the lower jaw, commencing at the symphysis, and extending it outwards on either side to a point just anterior to the facial artery. A second incision was carried vertically downwards from the centre of the jaw to the hyoid bone, at right angles to the first. The triangular flaps thus marked out (consisting af skin, areolar tissue, and the anterior fibres of the platysma myoides) were directed down. A narrow-bladed knife was then thrust in the mesian line close behind the bone, from below into the mouth, and swept along the inner surface of the lower jaw, as far as the posterior limits of the first incision, to divide the attachments of the muscles and the buccal membrane. An opening of sufficient extent being thus effected into the floor of the mouth, the tongue was drawn down upon the anterior part of the neck, and secured by my friend and colleague, Mr. J. F. West. The tongue being raised, I thrust a narrow bladed knife through the raphé from below, just in front of the hyoid bone, into the mouth. Withdrawing the blade, I passed one by one two écraseurs through the wound, fixing one on the right half of the tongue, the other on the left, just in front of the anterior pillars of the fauces; the left one was tightened clearly, though only a couple of lines, behind the posterior limits of the disease. My colleagues, Mr. Furneaux Jordan and Mr. J. St. S. Wilders, took respective charge of the left and right écraseurs, tightening each alternately, at intervals varying from half a

minute to a minute. Though the process of division was slow, no sooner did the écraseurs become detached than a large quantity of blood welled out of the wound, and the patient became very pale. I introduced my thumbs into the fauces, bringing forward the mucous membrane and grasping it together with the flaps which had been dissected down from the submental region. I thus attained two objects: compressing the bleeding surfaces and bringing the tongue well forward; the flapping epiglottis was in full view, and the risk of blood entering the trachea was averted. The surface of the wound and the stump of the tongue were immediately mopped with styptic colloid, a triangular lump of ice held in the mouth with a pair of forceps, long hot flannel stocking slipped on the arms, a hot blanket wrapped round the legs, and a brandy injection at once administered per rectum. After all oozing had ceased, the patient was carried from the theatre to the ward, where another brandy and beef-tea injection was given at once.—3 P.M. (three hours after operation): Reaction fully established; skin hot and moist; pulse 120, full; temperature $102\frac{1}{5}°$ respiration 36. Injection of beef-tea and brandy to be continued every two hours.—7 P.M.: Pulse 134; temperature 104°; respiration 28. The glazed flaps were gently brought together and made to meet by silver sutures in the transverse line; the vertical incisions was likewise approximated above, the lower angle being left open for free escape of secretions.

Oct. 4th.—9 A.M.: Passed a comfortable night; slept at intervals; no bleeding. Pulse 104; temperature $100\frac{3}{5}°$; respiration 32. Injections to be continued every fourth hour.—10 P.M.: Hæmorrhage rapid and profuse from the mouth. The quantity lost must have been considerable, for not only was the pillow saturated with blood, but a good deal was spilt on the floor. Dr. Jolly staunched the flow by steady pressure on both carotids for about two minutes, which produced instant syncope. A short time after a warm water and brandy injection the circulation became more developed, and there was no recurrence of the bleeding.

5th.—Free from pain; wound looks well, and is for the most part healed. Thist relieved by moistening his lips with ice; drank a cup of milk this morning. Pulse 110; temperature $101\frac{2}{5}°$; respiration 28.

6th.—Had an opiate last evening; nevertheless the night has been somewhat restless. Pulse 124; temperature $102\frac{2}{5}°$; respiration 24. Injections discontinued. The patient takes a cupful and a half of milk every four hours. To correct fetor of breath the following gargle was ordered (and to be kept iced): Chlorate of potash, one drachm and a half; borax and honey, one ounce; rose water, two ounces; to eight ounces of water.

7th.—Wound looks perfectly healed, except at lower angle of vertical incision, where the secretions from the mouth escape. Pulse 118, temperature 100⅘°; respiration 32. Altogether the patient is going on most favourably. To have two or three eggs daily, to be beaten up with milk which is taken freely.

8th.—Was frequently disturbed during the night by cough, which was relieved by mustard plasters to the chest. At times the man wanders, but speaks collectedly when aroused. Pulse 116; temperature 100⅘°; respiration 28. Takes milk, arrowroot, and calf's-foot jelly freely.

9th.—Passed a restless night. Faced flushed; expression of countenance anxious. Wound has opened up again along the base of the jaw, stitches removed, and strapping applied. There is a considerable swelling below and behind the angle of the jaw on the left side. Pulse 128; temperature 101⅘°; respiration 24.

10th.—Was restless during the night, and the stomach became exceedingly irritable, event to frequent vomiting. Ordered a draught, containing two drops of hydrocyanic acid, in a little mint water, which remained on the stomach; in an hour afterwards also to take some warm brandy-and water. Feels very low. Pulse 128, soft and feeble temperature 101°; respiration 30.

11th.—Worse: debility increasing; features sunken; pulse 138, scarcely perceptible. Temperature 100⅗°; respiration 38.

12th.—The patient gradually sank and died at 2 A.M. this morning.

*Examination of the tongue.*—As I had the pleasure of seeing Mr. T. H. Bartleet at the operation, I directed the tongue to be sent to him for examination. From the note with which he subsequently favoured me I take these facts: that, on looking down on to the dorsum of the tongue, the right side appeared perfectly healthy while the left side presented a foul excavated sore, reaching posteriorly to within one-eighth of an inch of the line of incision, on the under surface to within two lines of the raphé, on the upper surface to within three lines of the middle line. The disease extends nearly to the tip. The left side of the tongue is greatly thickened, being an inch and a half in depth, while the healthy side is barely three quarters of an inch. Nearly the whole surface of the left of the tongue consists of an ulcer, with the edges sinuous and undermined, foul and sloughy. The diseased part was horny on section. On cutting horizontally through the tongue, tubercular nodules were seen extending from the deeper parts of the ulcer towards the median line, and apparently resting in healthy tissue. These nodules were firm, and of a yellowish-grey colour. On microscopic examination of the juice obtained from a surface of the section, it was found to contain nucleated

cells of the size of blood-cells, and free nuclei; also large epithelial cells of various shapes, with two or three nuclei each, some of the cells being spherical, others ovoid, fusiform, or polygonal. A thin section showed irregular nucleated cells, lying side by side, and held together by fine fibres. Some of the cells contained oil-globules. and appeared shrunken. There were no distinct broad cells filled with large nuclei, and no laminated corpuscles.

*Autopsy*, Oct. 15th.—Stump of tongue in a healthy state; but the soft parts forming the floor of the mouth were in a very sloughy condition. Corresponding to the swelling behind and under left angle of jaw was an indurated lymphatic gland, a section of which presented charac teristic cancer cells. Thoracic and abdominal organs perfectly healthy. Lungs crepitant throughout, sections from both bases floating well on water.

The rapid enlargement of the gland beneath the jaw after the removal of the tongue was a striking fact, though not noticed during life, the gland must have been slowly on the increase some time; and the malignant deposit with which it was infiltrated somewhat lessens regret at the poor man's speedy death, for he could not have survived the glandular disease many months. Such a complication militates against the operation, but, even if suspected, would not necessarily be a bar to it. Most surgeons have amputated limbs and removed other parts where the neigbouring lymphatic glands have been enlarged, but they have regained normal dimensions on the subtraction of the irritating cause. We can never be certain that such will be the case but the risk must often be taken, in the absence of special indications to the contrary.

With the incisions for the submental aperture according to Regnoli's directions I am quite satisfied, for they fulfil the great indication of giving plenty of room without involving considerable vessels or important structures; they permit of the safe administration of chloroform throughout the operation, bring into view the whole extent of disease, and place under command the possible sources of hæmorrhage. Prof. Regnoli ligatured the stump of the tongue in several portions before he excised, and his case made an excellent recovery; it was not until four years later that cancer returned in the tonsils and proved fatal. At the foot of my copy of Regnoli's pamphlet I find this note, made in Florence the 15th of April, 1852: "The author told me the day before yesterday that he has performed the operation six times; only one of the patients, an old woman, died after a few days. He does not know what became of the other four cases that survived."

With the écraseur I was not satisfied, and should not employ it again

in a similar case. The bruising it inflicts is an evil only tolerable if the use of the instrument guarantees safety from hæmorrhage. The patient lost a good deal of blood during the operation, and would have died from secondary hæmorrhage the next day but for Dr. Jolly's prompt compression of the carotids. The écraseurs were certainly not tightened quite so slowly as M. Chassaignac directs: but Foacher has recorded a case* of partial removal of the tongue by two écraseurs worked at intervals of one minute, so that fifty minutes were required to effect the section; nevertheless, hæmorrhage was so profuse as to necessitate ligature of the external carotid.

The merit of the operative method followed in this case, and of that which Professor Syme, Mr. Fiddes, and Dr. George Buchanan† have practised, after the examples of Maisonneuve,‡ Huguier,§ Sédillot,‖ and and Rizzoli,¶ is a question for experimental solution. These surgeons have all divided the soft parts in the middle line through the lip to the hyoid bone, commanding the tongue by sawing through the symphysis of the jaw. In order not to interfere with voluntary deglutition, Mr. Syme divided the hyoglossi, but kept intact the genio-hyoidei and the mylo-hyoidei—an economical provision very deserving of notice.

Notwithstanding Mr. Nunneley's successful case** of removal of the entire tongue by ligature passed from the under chin, and his advocacy of the écraseur introduced through a submental opening—a suggestion to which the cases of Arnott, Mirault, and others give countenance,—I incline to the opinion that, if the entire tongue is to be excised at all, it must be brought into full view, so as to command efficiently the limits of the disease and the sources of hæmorrhage. Cancer of the tongue is a disease so painfull and fatal, the application of caustics and partial excisions offer so little promise, that the radical procedure merits further consideration with a view to judicial settlement of its propriety and plan. No cases remind one more than these do of the wise saying of the old Paris academicians: "L'opération n'est qu'un point dans l'exercise de la chirurgie." No cases stand in need of more precise pathological investigation, wider bibliographical research, and closer statistical scrutiny.—*Lancet.*

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* Quoted in THE LANCET, 1863, vol. i., p. 79.

† THE LANCET, 1860 to 1866.

‡ Gazette des Hôpitaux, 1862, p. 568.

§ Abeille Médicale, N. 31, Novembre 5, 1851.

‖ Traité de Médicine Opératoire, tome second, p. 35. Paris, 1855.

¶ Processo per la Demolizione della Lingua. Memorria del Professore Francesco Rizzoli. Bologna: Tipidi S. Tommaso d'Aquino, 1854.

** THE LANCET, vol. ii, 1861.

## FRACTURE OF THE PUBES, ETC.

By J. Waring Curran, L.R.C.S.I., L.K.Q.C.P.I, Etc, Spalding, Lincolnshire.

On the 20th ult. I was summoned as one of the medical officers of the Great Northern Railway Company, to visit one of the men who was injured near the Spalding junction. I found him lying by the side of the metals, supported by some of our officials. He was pale and shivering, quite conscious, but suffering the most agonising pain, which he particularly referred to the lower and right half of the abdomen; the stocking covering the right leg and foot was saturated with blood, which coagulated in its texture, and from the amount of deformity presented by the thigh of same side, together with other unequivocal symptoms, easily determined the existence of fracture of right femur at junction of lower with middle third. After the administration of a restorative, I had him carefully conveyed on a stretcher to his lodgings, when I was enabled to make a more exact examination. On the removal of his trowsers, &c., I observed a large lacerated wound fracturing the inner malleolus, and extending over the dorsum of the foot, exposing the bones of the tarsus; the posterior tibial was divided, but the crushing nature of the injury, produced by a truck-wheel passing over the foot, prevented much hæmorrhage. The fracture of the femur was at once apparent, the upper fragment being tilted upwards and forwards, the inferior backwards and outwards. The upper part of the thigh and lower of abdomen was ecchymosed and grazed. At this stage I was met by Dr. Ancell Ball, the other medical officer of the Company, with whose assistance I reduced the fracture and dressed the foot. Our chief anxiety was concentrated on the abdomen, over which the wheel passed. The bladder I relieved by catheter, the introduction of which required some little ingenuity, as there seemed a pouch in front of the prostrate, giving the feeling that the instrument was in the bladder. To find the passage at the posterior part of this manœuvring and patience were necessary. On the fourth day after the accident gangerene of the foot set in; and at a consultation held with Dr. Cammack, J.P. (the eminent surgeon), and Dr. Ancell Ball, we came to the conclusion that operation was out of the question, owing to the extensive abdominal injuries. The poor fellow died on Sunday morning last, and, in company with the above gentlemen, I made a *post-mortem* examination. The tissues over the pubes and right iliac region were infiltrated with effused blood: the pubes were fractured on both sides,—on the left side the horizontal ramus three-quarters of an inch *from* the symphisis, and on the right side the descending ramus was broken half-an-inch above its junction with the ascending ramus of the ischium. This is the most interesting feature

in the case, and attracted the attention of all three, that in an individual not quite twenty-one years of age the pubes should not have yielded at the line of articulation, as the cartilages were not ossified. Instead of fracturing in the strongest part of the bone I removed and made a preparation of the bones, which shows the cartilages uninjured. The triangular ligament was torn, and the anterior surface of the walls of the sigmoid flexure of the colon and upper-third of the rectum was infiltrated with blood, and presented a bruised appearance, but no laceration existed. We never were able to set up a satisfactory reaction, or rally him from the shock which he sustained.—*Med. Press and Circular.*

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## CARBOLIC ACID IN CUTANEOUS DISEASE.

My object in citing the following cases, is to call the attention of the profession to the efficacy of carbolic acid in the treatment of diseases of the skin, particularly those which are known to depend upon, or are accompanied by, the development of any of the forms of fungi. I am not aware that this hydro-carbon has been used before, in the treatment of disease, except as a disinfectant.

Case I.—*Chronic Eczema.* The patient, a child six months old, nursed by its mother, a young and apparently healthy woman. Eruption first appeared upon the scalp, when the infant was two and a half months old. The nurse applied olive oil, cleansing the head daily with Castile soap and tepid water; the eruptions, however, progressed rapidly, and when I first saw the child, namely three and a half months from the time the disease commenced, not only the head but the entire trunk and extremities presented a most pitable appearance. The thin, soft incrustations, more broad than prominent, of eczema impetiginodes, occupied the head, back, chest, and limbs, while here and there a fresh group of vesicles of eczema simplex pointed out most pathognomonically, the true nature of the eruption. The evacuations were variable, sometimes of natural colour, at others persistently green, and always very acid, as shown by litmus; on examination by microscope, they were found to contain milk corpuscles in abundance, mixed with casein, that separated by the lactic acid of the stomach, had passed into the duodenum undigested, and mingling with the bile, had drifted through the intestinal canal. The urine was examined chemically, and by microscope; it was highly acid, depositing urates freely; a few drops evaporated on a glass slide gave glomeruli and isolated crystals of uric acid. The serous exudation beneath the incrustations was also highly acid. The milk from the mother of the child was also carefully examined; it contained an

abnormal quantity of lactic acid, though the corpuscles did not coalesce, it gave an acid reaction to neutral litmus. Under the influence of thoroughly alkaline treatment, namely, baths with bicarb. soda, and bicarb potass. internally, three times per day, in quantities sufficient to completely neutralize the acid reactions of the dejections, urine, and serum from the eruption, (an alkali was also given to the mother,) so rapid was the improvement, that within ten days, the scalp was free from disease, and the irritation of the surface everywhere much abated.

Fresh groups of eczema simplex, however, continued to be reproduced upon body and limbs. I then determined to try the effects of carbolic acid as a parasiticide, having recently tested its power in the destruction of the penicillium glaucum, and torula cerevisiæ; accordingly, a solution containing half a drachm of carbolic acid in four ounces of water, was applied three times per day, to the eruption. The effect was immediate; the vesicles disappeared promptly, producing a slight exfoliation, and did not return, except a few groups about the neck, which two or three applications of the solution removed.

Case II.—*Impetigo.* The patient was a child of ten months old, of strongly strumous diathesis; the psydracious pustules were developed upon the upper lip, and about the mouth, while from the nares issued a sanious and very acrid discharge. The carbolic, same strength as before, was used freely upon the eruption, and the nares were also injected with the solution; the effect was quite as marked as in the former case, the pustules withered, and soon altogether disappeared, leaving the skin free from irritation.

Case III.—*Psoriasis inveterata.* Two years standing; the patient a stout girl fifteen years of age, body and limbs covered with the eruption. Ordered Donovan's sol. Carbolic acid to be applied every morning in proportion of one part of the acid to four of water, body to be sponged with Castile soap and warm water, prior to its application. In three weeks from the date of the first application, not a vestige of the eruption remained. How far the Donovan's solution assisted in producing this rapid convalescence from one of the most obstinate of all cutaneous diseases, I leave others to judge.—*N. Y. Med. Jour.*

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## ACUTE SYNOVITIS OF KNEE-JOINT; SUPPURATION. TREATMENT BY CARBOLIC ACID.

By T. Hamilton, M.D., F.R.C.S.E.

On Monday, the 22nd of June last, I was called to see I. M——, a young woman aged twenty-two. She told me that whilst at work three

days before she was seized suddenly with pain in her left knee, which swelled soon afterwards. Since then the pain and swelling had increased. I found the joint much swollen and red, with distinct fluctuation on each side. Ordered hot fomentations and rest. During the next three days she continued in much the same state.

On Friday, June 26th, as suppuration had evidently taken place, having previously dipped the knife in a strong solution of carbolic acid, I evacuated between six and eight ounces of pus, by incisions about an inch and a half long, on each side of the joint. I allowed the matter to escape under what Mr. Lister has termed the antiseptic veil. A paste of carbolic acid, linseed oil, one part to three, and whiting, was applied to the wounds on lead paper. (I could not obtain tin-foil.) Slight pressure was placed on the sac of the abcess, by two pads of lint on each side of the joint, with a bandage.

Next day I found the patient free of all pain. Pulse 80. Had slept well. On removing the dressing, a little bloody serum escaped, but no pus, and since then none has come from the wounds.

For the next four days I applied the carbolic paste, but each day weaker.

July 1st.—Swelling entirely gone. No pain. No discharge. Wounds superficial, and nearly healed. Slight excoriation of the neighboring cuticle, from the action of the carbolic acid, for which I applied water dressing.

This cases requires no comment. The rapid cure was, without doubt, due entirely to my having adopted the plan of treatment suggested by Professor Lister: and I would venture to say, that under no other form of treatment, at present employed, would so satisfactory a result have been obtained in six days from laying open the joint.

To-day (July 2nd), though I still keep the joint comparatively at rest, the patient can move it freely without the least pain.—*Lancet.*

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## Medicine.

### A CASE OF APHASIA, WITH REMARKS.

By Charles C. Lee, M. D., Attending Physician to the Charity Hospital, etc.

In the January and April numbers of the *Psychological Journal* for the present year, appeared two highly interesting articles on the pathology of aphasia. In the first of these especially, which was an able and exhaustive *résumé* of the subject by Dr. E. C. Seguin, of this city, an

appeal was made to the profession to place on record additional cases, that, by the comparison of a more extended series of observations, a nearer approach to solving the vexed question of aphasia might be reached. With this object I offer the following case, which occured during my service last summer at the Charity Hospital :

Case.—John W——, aged 52, was admitted to the Hospital for herpes zoster, August 16th. Upon examining him the following day, I was at once struck by his inability to articulate, which was the more striking in contrast with his intelligent expression and the readiness with which the tongue was extended. He understood perfectly all the questions put to him, and, on being asked how long he had been speechless, he counted on his fingers "one, two, three," etc., up to ten years, naming the numerals in succession; but no effort on his part could compass the expression "ten years" without counting on his fingers. He said "Yes" and "no" without difficulty, and answered correctly by those monosyllables all simply affirmative or negative questions. The reading and writing power was quite lost, although he could formerly write with ease; but there was not the slightest hemiplegia either of motion or sensation. The case was, therefore, apparently one of the second grade of aphasia, according to Trousseau's classification, viz., amnesia of speech and of written language, without loss of gesture. With some difficulty the following history was elicited, partly from the patient himself and partly from his wife.

Ten years ago, while in seemingly good health, he was seized with convulsions during sleep; these lasted for two hours, and were epileptiform (as described), being followed by stertorous breathing and partial coma for three days. There was also retention of urine during these three days, after which the patient gradually regained his normal health, with the exception of defective vision of the *right* eye and entire loss of speech. His memory was also for a long time impaired, but now seems restored. He has never been able to read or write since the date referred to, and can now only say "yes" and "no," and count up to ten. The right eye is sightless, and presents the sequelæ of general ophthalmitis: the globe is "boggy" upon pressure, which produces no scintillations, and no sympathetic irritation has existed in the left.

No cardiac disease or fatty degeneration could be detected, nor were the arteries atheromatous—no *arcus senilis* in either eye; the patient's appetite was good, and his habits modorately active. His gait was erect and steady, and, as above stated, not the faintest evidence of hemiplegia existed. These points were verified by repeated examinations, and the record is transcribed from notes taken at the time.

The patient soon recovered from his attack of herpes, which was treated in the usual manner, and was then placed on the use of bromide of potassium, more for the purpose of keeping him under observation than with the expectation of any therapeutic result.

In a short time, however, he became dissatisfied—alarmed, doubtless, by the amount of attention he received from his physicians—and insisted on leaving the hospital, whence he was discharged September 2, 1868. The case is still under my observation, and exhibits at the present date no change from the condition described.

The most noticeable feature in the above case is the length of time (ten years) the aphasic condition has lasted. Both the patient and his wife are positive in fixing the date of his seizure in 1858, which makes the duration ten years without such an advance of the cerebral diseases to cause hemiplegia. This, however, is not without precedent; for one of the two cases, upon which M. Broca ventured to propound his remarkable localization of the faculty of language, was a patient of Dr. Auburtin who had been speechless for twenty years. At the autopsy of this case the lesion was found in the left frontal lobe, but was not limited to the third frontal convolution.

It is no part of the object of this paper to discuss the literature of Aphasia. This has been thoroughly done by Dr. Seguin, whose record includes all that has been published on the subject from the time when Bouillaud located the faculty of speech in the two anterior lobes of the brain (1825), to the present date, with one exception. We allude to the essay of Dr. Albert Carrier,* which contains an excellent historical sketch of the subject, with an analysis of the cases of Fabret, Hughlings Jackson, Vulpian and Charcot, Lancereau, etc., and details some heretofore unpublished. Dr. Carrier is a strong partisan of Broca's doctrine, in spite of Trousseau's and Gratiolet's able arguments to the contrary, and seems to throw some grave doubts upon the priority of Dr. Marc Dax's essay. The author also makes an elaborate and ingenious effort to explain the frequent association of aphasia with disease of the left cerebral hemisphere, based upon Gratiolet's observations of the more rapid development of the left frontal convolutions than those of the right side; but he seems so warm an advocate of M. Broca's views as to be unable to judge the question impartially. *New York Medical Journal.*

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*Etude sur la Locolisation dans le Cerveau de la Faculté de la Language articulé. Par le Dr. Albert Carrier. 1867. Paris: Baillière.

## ON THE PATHOLOGY AND TREATMENT OF ACUTE RHEUMATISM

By John C. Peters, M.D.

Acute rheumatism is attended with profuse *acid* secretions from the skin; by the excretion, in some cases, of large quantities of lactic, uric, and sulphuric acids through the kidneys; and by a highly fibrinous condition of the blood.

Dr. Prout was the first to suggest that all the phenomena of rheumatism might be referred to the presence of *lactic* acid, developed too abundantly in the system; but Dr. W. B. Richardson has absolutely proved that an excess of this acid induces all the pathological phenomena of the disease. He injected strong solutions of lactic acid into the cavity of the peritoneum of animals, and found them to excite well marked endocarditis, with inflammation of the cardiac valves, and copious deposits of fibrin upon them, attended with affection of various joints and metastasis, so that first one joint suffered, then another, and again the heart. Distinct sclerotitis was also observed several times.

The questions naturally arise how does lactic acid originate in the system, or how is it introduced, and how is an excess of it brought about?

Lactic acid, both in its free and combined state, occurs very frequently, and perhaps invariably, in the gastric juice, as a component part of that secretion; and its physiological value in aiding in the digestion of nitrogenous food is by no means inconsiderable. In fact, in association with free hydrochloric acid, it so essentially contributes to the digestive power of the gastric juice, that no other acid, mineral or organic can replace it.

Again, the acid reaction which the contents of the small intestines always present, depends mainly on the presence of lactic acid; and crystals of lactate of lime have repeatedly been obtained by Lehman. It has been found that the free lactic acid in the small bowels materially assists in promoting absorption of the digested food into the alkaline blood, in accordance with the well known laws of endosmosis.

The fluid secreted by the large intestine and lower portion of the ileum is always alkaline, except in disease, and neutralizes any ordinary excess of acid which reaches it.

The lactates are also constantly present in the chyle, especially during the digestion of amylaceous food; and a large portion of the lactic acid found in the stomach, bowels, and chyle, owes its formation to the starchy and saccharine part of the food undergoing a change similar to that which takes place in the fermentation of milk. The sugar which is formed in the liver is also converted into lactic acid. In fact, before

the sugar and starch of the food can be applied to the maintenance of animal heat, they have first to be converted into lactic acid, which then combines, in the blood, with oxygen, to form carbonic acid and water. Whatever interferes with the latter part of this series of normal changes leads to the accumulation of lactic and other allied acids in the system, and may develop rheumatism.

But the blood is always *alkaline* in the healthy state, and the immense amount of acid, which is conveyed to it from the stomach and bowels, through the lacteals, must be disposed of almost immediately. How this is done is proven by the experiments of Lehman. He repeatedly injected lactate of soda into the jugular veins of dogs, and found that in five, or at the latest, in twelve minutes, the urine became alkaline, showing that the lactate had been oxidized and converted into a carbonate in that short time. Day also tells us that it is well known that lactic acid may collect abnormally in the blood in such quantities as to be detected chemically, when the normal oxidation in that fluid is prevented.

But free lactic acid re-appears again in the muscles, and in fact exists normally in the muscular fluid in such large quantities that Liebig believes that they are more than sufficient to saturate the alkali of all the the alkaline fluids of the body. Some believe that combined lactic acid is separated from the blood and becomes free in the muscles; others think that the major part of the muscle lactic acid must be considered as a product of the metamorphosis of the muscular fibre, a view somewhat confirmed by the fact that the amount of free acid in the muscles is proportioned to the extent to which they have previously been exercised.

The lactic acid which so abundantly formed in the muscles can be carried off by no other channel than by the lymphatics. But the lymph, like the blood, is alkaline; and when incinerated, its ashes have been found to yield much carbonated alkali. Hence the lactates should become combined, oxidized, or converted in the lymph as rapidly as is the case in the blood. If they do not do this, an excess of lactic acid will arise in this direction, and some or all the phenomena of rheumatism may ensue.

Schottin and Lehman deny that lactic acid ever occurs in normal or even in morbid perspiration, although other chemists maintain that it does. However this may be, it is well known that large quantities both of *acetic* and *formic* acids are always found in ordinary sweat, and that a chill of the surface or a check of perspiration throws back into the circulation a large quantity of acid which should have been eliminated from the skin. It is equally well known that acetic and formic acids are closely allied to lactic acid, and Fuller has long maintained that the poison of rheumatism is identical with some natural excretion of the skin.

Until these views of the nature of rheumatism are disproven *alkalies* must form the basis of its treatment. Other remedies may prove more or less useful, and occasionally successful, but never very reliable. The alkaline treatment, which was originally suggested by Brocklesby in 1764, has always had its advocates, and never more than at the present time. When alkalies are wisely and freely given, rheumatic patients soon lose their pains and proceed rapidly towards convalescence; the pulse is generally tranquillized in forty-eight hours, and the pains are lulled in twenty-four more, especially if the excess of acid has been so thoroughly neutralized that the urine becomes alkaline.

In the earlier stages of the disease, before the patient becomes utterly helpless, the bowels should be freely moved and the liver well acted upon. All refuse of food should be purged away, and every gross contamination of the stomach and bowels should be obviated. When the disease is at its height, purging is cruel, if not injurious; for then the patient presents a pitiable spectacle of helpless suffering. He lies on his back often, unable to raise a hand or move a foot without excessive suffering, he is generally obliged to be fed and assisted in every operation of nature. The best preliminary purge is one or several of White's pills, composed each of hydrarg. submur., gr.j; ext. colchici, gr.ss–j; ext. aloes, gr.j; pulv. ipecac, gr.ss; to be taken at night, and followed by several drachms of Rochelle salts in solution. Then Rochelle salts, which are made by adding cream of tartar to a solution of carbonate of soda, should be given in drachm or half drachm doses, night and day until the urine becomes alkaline. When thus given they rarely purge, but merely neutralize the excess of acid in the system and act upon the kidneys. At first they may be given in simple solution in water; if they become distasteful, and cause flatulence or debility, some aromatic water or alkaline stimulant may be added, thus:

Sodæ potassio tartratis, oz.j, aquæ menthæ viridis, *vel* cinnamoni, oz.viij. Dose: 1 or two tablespoonfuls every four hours.

Sodæ potassio tartratis, oz.j; aquæ, oz.vi–vij; syrupi zinziberis, oz.j–ij. Dose: as above.

Sodæ potassio tartratis, oz.j; aquæ, oz.vj–vij; liquor ammoniæ anisatæ, *vel* spiritus ammon. aromat., oz.j–ij. Dose: as above.

Sodæ potassio tartratis, oz.j; sodæ sesquicarb., *vel* magnesiæ carb., oz.j; aquæ, oz.vj; tinct. lupulini, oz.ij. Dose: as above.

The *phosphate of soda* is almost as useful as the potassio-tartrate, and perhaps more so in debilitated and scrofulous subjects. It has very little taste, and is one of the best solvents of *lithic acid*, and may be given to rheumatic patients whenever there is an evident excess of lithates. The

dose is the same as for Rochelle salts, or one ounce may be put in a pound of beef tea and consumed in the course of the day.

When there is an excess of *uric* acid, *colchicum* is one of the most important remedies. It promotes evacuation by the kidneys, prevents the formation and increases the excretion of uric acid, and exercises a specific influence whereby the formation of the rheumatic poison is checked. It is, however, far less efficacious in the weak and nervous than in the robust and plethoric, and of much more value when synovial rheumatism predominates than in the purely fibrinous variety. It should be given in non-purgative doses of from 5 to 15 drops, from two to four times a day.

*Aconite* is a most useful remedy when the perspiration is deficient, or of a non-specific character. If perspiration does not occur the pains are always excessively severe; if it ceases unexpectedly the constitutional symptoms are all increased. The perspiration in rheumatism should be acid, reddening litmus paper, and of a disagreeable sour odour. The *materies morbi* is obviously got rid of by this kind of sweating, and the natural cure of the disease is effected in part by these profuse sour-smell-perspirations. This, says Aitken, is nature's cure of the disease. It may be somewhat wasting and enfeebling, as excessive perspiration always is, but it is highly sanative also; and is only useless when it is not of this characteristic sour description. Aconite acts upon the skin as specifically as colchicum does upon the liver and kidneys, and often relieves rheumatic fever and pain far better than opium. Like colchicum it has some peculiar curative relation to the rheumatic process, and it is exceedingly doubtful whether it ever relieves fever, inflammation, or neuralgia which is not based upon or connected with a rheumatic taint. From three to five drops may be given three times a day, in combination with the Rochelle salts and colchicum.

In those cases in which opium must be given to allay the severity of the suffering, it will often aid in producing perspiration, and thus help the elimination of the disease. The acetate of morphine is a convenient preparation and may be given in combination with the acetate of potash, omitting the other alkaline remedies.

Morphiœ acetatis, gr.ij–iv; potassæ acetatis, oz.j; aquæ, oz.vj; solve, and add syrupi limonis, oz,ij. Dose: 1 or 2 tablespoonfuls every two or three hours.

When the fever is excessive, potassæ nitratis, dr.ij; tinct. aconit acid, dr.j; spts. nit. dulc., oz.ij; aquæ, oz.iv; syrupi limonis, oz.ij. Dose: 1 or 2 tablespoonfuls, every two or four hours.

Lemon juice is a citrate of potash, and may be used freely. Even the

citric acid tends to the formation of urea and carbonic acid in place of uric acid.

When the disease is located in the feet or hands, they can be soaked frequently in a warm alkaline foot or hand bath.

A mixed alkaline and anodyne solution applied as a fomentation is the most certain and useful in allaying the pain and inflammation. One ounce of carbonate of potash may be dissolved in twelve ounces of water, to which one ounce each of tincture of opium and aconite root should be added, and four ounces of Cologne water.

Vichy water should be used freely as a common drink.

Sleeping in blankets, according to Chambers, reduces by three-fourths the risk of inflammation of the heart in rheumatism, diminishes the intensity of the fever, greatly lessens the danger from any other complication and does not protract convalescence.—*Medical Gazette.*

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## ON THE DETECTION OF LUNG-TISSUE IN THE EXPECTORATION OF PERSONS AFFECTED WITH PHTHISIS.

By Samuel Fenwick, M.D., Assistant-Physician to the London Hospital, late Assistant-Physician to the City of London Hospital for Diseases of the Chest.

Upwards of twenty years ago Schroeder van der Kolk discovered that the sputa of persons affected with phthisis frequently contained particles of lung. Some time afterwards Dr. Andrew Clark also observed and published the same fact. The method of examination adopted by each of those pathologists was nearly the same. The expectoration was poured upon a flat surface, and any particles that seemed likely to contain the elastic fibre were picked out with needles and placed beneath the microscope. Considerable care and experience were, however, required for this procedure, and the physician could never be certain that some portions of the lung-structures had not been overlooked. Whilst engaged in experiments on this subject, it occurred to me that if the mucus of the expectorated matters could be liquefied, any fragments of pulmonary tissue enveloped therein would be deposited, as the salts of lithic and oxalic acids are, in the urine. This anticipation proved to be correct; for I found that, when the sputa of persons suffering from consumption were boiled with soda and allowed to stand for a short time, particles of the elastic fibre of the lung were precipitated. The results obtained by the examination of the expectorations of one hundred real or suspected cases of phthisis were published in the forty-ninth volume of the Transactions of the Royal Medical and Chirurgical Society, and it was proved that fragments of pulmonary elastic fibre can easily be detect-

ed in the sputa whenever ulceration of the lungs is progressing. I have during the last three years had constant opportunities of testing the value of this means of diagnosis, and I trust that the conclusions at which I have arrived may prove interesting and useful to the profession.

It will be readily understood that some alteration in the appearance of the lung-tissue is produced by both the disease and the alkalines olution; nevertheless recognition of the various tissue-elements is a simple matter. In some instances the particles are so small that they seem like a few fine fibres disposed in a circular or semi-circular manner; in others, whole pulmonary vesicles can be recognised, or a number of such cells may be seen united as an irregular fragment. The larger bronchial tubes undergoing disintegration are occasionally represented by a simple layer of membrane; but the smaller tubes yield portions of considerable length, exhibiting their branching arrangement. In the majority of cases we meet with all these different forms of lung structure in a single specimen of expectoration; and we may estimate the rate at which the disease is progressing by counting the particles.

The number of cases analysed in the present paper is 141. In all of them I have recorded, in my notes, the history, general symptoms, physical examination of the chest, and the microscopical examination of the sputa. As the cases are taken without selection, they fairly show what amount of assistance the physician may expect to derive from this method of diagnosis.

There are no cases of phthisis more difficult of diagnosis than those in which that disease is associated with inflammatory affections of the air-passages. In such the microscopical examination of the sputa has often proved of the greatest value, and in a few minutes has decided the diagnosis.

I have notes of 23 cases of bronchitis in which phthisis was suspected either from the general symptoms or from the examination of the chest. In 11, lung-tissue was found in the sputa. Three of these ceased to attend the hospital shortly after the date of examination, but the subsequent history of the remainder proved that consumption was present. Of the 12 in which pulmonary elastic fibre was not found, 6 shortly ceased to attend, and the remaining 6 proved to be cases of uncomplicated bronchitis. As far therefore as can be ascertained, although the general symptoms and the examination of the chest gave uncertain results, the microscope had distinctly indicated the nature of the disease in all.

When phthisis occurs in persons who have for many years suffered from chronic catarrh the diagnosis is often very difficult. The reason-

ance on percussion in the upper parts of the chest may be abnormally clear from the existence of emphysema, and auscultation frequently fails to reveal positive signs of the presence of tubercle. The following case is an example of this form of disease, and shows the value of microscopical examination of the sputa.

A man, thirty-two years of age, had been subject to cough for six years, and had suffered from hæmoptysis two years before his admission as an out-patient at the Victoria-park Hospital. There was no dulness on percussion; dry rhonchus could be heard over the whole of the anterior part of the chest, and moist râles were present at the bases of the lungs. The expectoration in twelve hours amounted to seven drachms of thin, watery fluid; but when examined microscopically a considerable amount of pulmonary elastic fibre was found.

I have notes of a number of cases of this description, in which the use of the microscope has been of value, and whose subsequent histories have confirmed the truth of the diagnosis. In the following no lung-tissue could be discovered in the expectoration, although the general symptoms seem to indicate phthisis more clearly than in the case I have just quoted.

A woman, five months pregnant, had suffered from winter cough for eight years, but for a few months had rapidly lost flesh and strength, the cough being very severe and the expectoration copious. I believed I could detect a slight deficiency in the resonance on percussion in the right subclavicular region. There were mucous râles in the anterior parts of the chest, with harsh inspiration at the base of each lung. I could find no lung-tissue, but the symptoms were of so suspicious a nature that I examined the sputa again after a fortnight, but with the same result. She steadily improved under treatment, and at her last visit she reported that her cough had disappeared.

In the next cases phthisis was suspected chiefly from the appearance of the patient and the severity of her symptoms.

A woman, forty-one years of age, had been subject to bronchitis for five years; but had been much worse than usual during the four months preceeding her visit to me. There was rapid loss of flesh and strength, severe sweatings, and profuse expectoration. Pulse 120. I could discover no dulness; but there were mucous râles at the base of each lung. No lung-tissue could be found in the sputa. She remained for some time under treatment, with but little improvement; and when she ceased to attend, I suspected that she suffered from phthisis, although the microscope, as well as the auscultation, had failed to detect ulceration of the lung. Two years afterwards she returned with a similar attack, having in the meanwhile been healthy.

It is often difficult to diagnose phthisis at an early stage, when, along with the physical signs of bronchitis, the larynx is diseased. The indications presented by the vocal reasonance are not to be obtained; and, if there be no distinct dulness on percussion, one is left in doubt as to the nature of the case. The difficulty is still further increased if the occupation of the patient has exposed him to the action of dust, or to the prolonged use of the voice.

An omnibus conductor, thirty-seven years of age, came under my care in July, 1866. He had loss of voice, with cough and little expectoration, for two months. Pulse 85. I fancied I could detect a slight diminution in the percussion note below the right clavicle; but of this I could not satisfy myself. The only sign on auscultaation was a dry rhonchus diffused over both sides of the chest. He brought to me the expectoration of three mornings, which only amounted to seven drachms of thin mucus. The microscope showed forty-one pieces of lung-tissue in it. Hæmoptysis occurred two weeks afterwards, and his pulse rose to 96. In December, 1866, he had lost in weight 7 lb., and the dulness below the clavicle was distinct. He remained under observation until, the following May, but was greatly emaciated when I last saw him.

A carman, twenty-seven years of age, complained of cough and expectoration for six months, with a loss of voice of three months duration. There had been no hæmoptysis; pulse 108. There was no dulness on percussion, and no sign on auscultation, except some mucous râles at the lower and posterior part of the lungs. There was therefore no evidence of phthisis; but in five hours he expectorated five drachms of brown-coloured opaque, tenacious mucus, in which the microscope detected fifty-eight fragments of lung-tissue.

Phthisis is often ushered in with an attack of pleurisy. In such cases the development of the signs of consumption is frequently very gradual, and it is only by careful attention to the history of the patient that a correct conclusion can be arrived at. I have notes of some cases of pleurisy in which the slowness of convalescence led to the suspicion of tubercle, but no lung-tissue could be found in the sputa; in all, the subsequent histories proved the disease to have been of a simply inflammatory nature. The following case, however, will show in a positive manner how valuable the microscope may be in the detection of ulceration of the lung.

A man, aged thirty-three years, had been subject to cough for fifteen years, and for six weeks had suffered from pleurisy. The microscope detected twenty-seven particles of pulmonary tissue in the sputa. The effusion slowly disappeared. Four months afterwards mucous râles were

detected below the left clavicle. He remained under observation thirteen months, and during the latter part of that time presented all the ordinary symptoms of phthisis.

A striking case of this kind occurred, in which particles of lung-tissue were found in the expectoration. The patient recovered from the pleurisy, the cough disappeared, and he ceased to attend the hospital. Many months afterwards he reappeared, with well-marked signs of phthisis.

I have never detected any pulmonary structure in the sputa of persons affected with uncomplicated pneumonia, although we might imagine that minute portions of lung might be thrown off in this disease. In the following case the microscope enabled me to predict the approach of consumption before any evidence of the presence of tubercle could be obtained by auscultation.

A lady had been suffering from pneumonia of the left lung for three weeks before I saw her. She had been losing flesh and strength, but had no cough before the attack. Neither of the medical gentlemen in charge of the case nor myself could detect any evidence of tubercular deposit in the opposite lung. The expectoration was profuse, but no lung-tissue could be discovered in it. Three weeks afterwards, hearing that she was recovering very slowly, I requested that another specimen of her sputa might be sent to me, and in this numerous particles of pulmonary elastic fibre were found. Some time afterwards physical signs of consolidation were detected at the apex of the right lung, and she died of phthisis eighteen months after the commencement of her illness.

This case shows that we ought not to trust to a single examination of the sputa when the results are of a negative character, but should repeat it from time to time if the symptoms be of a nature to cause a suspicion of phthisis.

From the above facts, there can be no doubt that microscopical examination of the sputa is of great value in all cases were phthisis supervenes on, or is connected with, inflammatory affections of the lung or pleura. But the question may occur to some who have not practised this means of diagnosis—How can the microscope detect pulmonary ulceration so long before its presence is revealed by the stethoscope? The following experiment will give some idea of the delicacy of the test:—

One-tenth of a grain of lung-tissue was divided by needles into ten parts and one-hundredth part of a grain thus obtained was placed in the expectoration of a person affected with bronchitis, which had been proved by previous examination not to contain elastic fibre. The mucus was

liquefied by boiling with a solution of pure soda, and the mixture was then poured into a conical vessel. The particle of lung was easily removed and examined with the microscope. But as this fragment of lung consisted of from twenty to thirty air-cells, and as the presence of elastic fibre can be determined by means of the microscope in half or in even a smaller part of a single air-cell, it is evident that it may be possible in this way to detect from the four-thousandth to the six-thousandth part of a grain of pulmonary structure in the sputa of persons suffering from phthisis.

Practically, we never have to seek for so minute a quantity of elastic fibre in a specimen of expectoration. I only quote this experiment to show that, as we have the means of detecting pulmonary tissue in such minute quantities, we may reasonably assume that we will be able to obtain evidence of ulceration of the lung long before the destruction of the organ has advanced far enough to produce signs that can be recognised by the stethoscope.—*Lancet.*

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## VENTILATION.

By Henry MacCormac, M.D.

The question of ventilation is far from being exhausted. In ventilating, the great object to aim at, is to render the house air, particularly the night house air, pure as is the air outside the house. I say by night in especial, because by day the nose and other organs of apprehension are awake, whereas by night they are asleep. By day the waking man can more or less take care of himself, while by night he is helpless and defenceless comparatively. If he go to bed in tainted air, he breathes this tainted air, the long night through. If it be tainted when he lies down, it is tainted tenfold when he gets up. People, some people, say that night air is unwholesome. What do they mean. Can they exclude night air. Is not all air by night, night air. Oh, but say these people, we sleep in a big room, we have plenty of air. But what signifies how much air you have if it be bad air, unwholesome air; will the mere bigness of the enclosure make it good. Can any air prove wholesome that is not renewed. Will the air in the remoter parts of the room, the unbreathed air, come over of its own accord to your lungs and suffer itself to be breathed. It will not do so any more than the loaf will come to be eaten or the book to be read when it lies there. You just breathe more or less the same stagnant air which subsists about you, let the room be never so large. It needs movement, constant movement, to renew the atmosphere and render it effectively safe and wholesome. It needs the window to be pulled

down by night, and nothing less in these regions, at least as houses are at present constructed, will suffice.

Two expedients may be resorted to in order to promote ventilation. By the first expedient there is the ordinary chimney opening below. But above this is a dwarf wall, or septum if you will, composed of six inch majolica or other tiles set in a suitable bronze or iron frame, and secured with ornamental bolts and nuts at the intersections. This frame, the top of it, should rise four or six feet above the grate. Above, there is a second opening regulated by a concealed valve covered by a handsome mantel piece. This arrangement, or something similar, minus the valve, subsists in a rude but effective fashion in many of the farmers' houses in the north of Ireland; and it is pleasant on going into these farmhouses to find how well the ventilation, so far as the kitchens and dairy ventilation are concerned, is promoted. A person may stand or sit before the fire and feel that the ventilation is satisfactory above the height of his head in either case.

The second procedure which may be conjoined with the first, has never in its entirety been set forth before. And should it ever come to secure general adoption, I trust that those who in this case are to benefit by it will not omit to connect the arrangement with the originator. Imagine then a good, plain, low, straight-barred grate, with or without splayed sides, and an iron, copper, tin or terra cotta back. Behind this back is a hot-air chamber communicating by one or more openings of—say two feet—joint section, with the open air. This chamber should otherwise be of sufficiently large dimensions, and communicate by other openings with the living room,—for example: the back of the room, the joint sections of the warm-air openings or outlets being equal to the joint sections of the cold-air inlets, the whole in every case being under the control of slide valves. In the fire-front there is an ornamental bronze or metal screen (electro-plate would look well,) in two valves or slide doors running on rollers, one to one side, the other to the other side behind the chimney jambs, the ornamental apertures of the screen being fitted with thin green or other glass, or Russian talc. In the thick of the wall on each side of the fireplace a duct or ducts are to run to the ceiling, terminating behind the perforated cornice above and below, one on each side of the fireplace, in grated openings so arranged, the screen in front of the fire for the time being closed, as to supply the fire with the foul air of the apartment as drawn down from the ceiling and, *pari passu*, to fill the room with tempered air, that is to say, air tempered to 50° or 60° of Fahrenheit. It would not be needful to keep the screen or screens constantly closed, but only sufficiently so, and sufficiently open to cheer up the fire

and effectively ventilate the apartment with tempered air. A cheerful fire I say would result with more or less complete ventilation, as well as perfect safety. Our sitting and bedrooms might thus be provided with renewed and tempered air at once by night and day, coupled with every beautiful, artistic, and healthful appliance besides.—*Medical Press and Circular.*

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## COMMENTARY ON FIVE CASES OF PROGRESSIVE LOCOMOTOR ATAXIA.

By Robert Bartholow, M.D., Prof. of Materia Medica and Therapeutics in the Medical College of Ohio.

Two years ago I reported in this Journal an interesting and instructive case of Progressive Locomotor Ataxia. Four other cases have come under my observation since that time. I propose now to analyse these cases, to show in what respect they differ amongst themselves, the points of agreement, and the significance of the phenomena which they present.

I am the more induced to make these observations, for the reason that this disease is frequently confounded with paralysis, by those who ought to know better. "Is progressive locomotor ataxy a distinct disease from general paralysis?" was a question recently proposed for discussion by a State Medical Society. Such a question indicates a want of acquaintance with the essential phenomena of this disease. Progressive locomotor ataxia, consists in the loss of the power to coördinate muscular movements, the muscular force being in the main preserved. This definition is exceedingly unlike that of paralysis.

Duchesne's division of progressive locomotor ataxia into periods, is a natural one, and has been followed by the most influential writers, except Lockhart Clarke. He divides the disease into three periods: "the first is characterized by three symptoms—pains, ocular derangements, and anaphrodisia; the second, by disorders of locomotion and of sensibility in the inferior extremities; and the third, by the extension of the same disorders to the upper extremities." It will be convenient, in the analysis of these cases, to follow this arrangement.

Two of these cases are citizens of Cincinnati; one resides in Cleveland, O.; one in Boston, Mass., and one in Covington, Ky. To avoid repetition and to prevent confusion, I propose to designate them by numerals.

Profession. No. 1, is a gilder and looking-glass frame maker. No. 2 is a retired merchant, but is yet engaged in the supervision of large property interests; No. 3 was for many years employed as railroad con-

ductor, but was compelled to relinquish this employment two years ago. No. 4 is a merchant in the leather trade, as manufacturer and wholesale dealer; No. 5 is a manufacturer and dealer in tobacco.

*Age at which the Disease manifested itself. Temperament and constitutional Peculiarities.* The disease commenced in No. 1, at 35. He is 5 feet 5 in. in height; has a light complexion, light auburn hair, blue eyes and the lymphatic temperament. The first symptoms manifested themselves in No. 2, at 40 years of age; he is now 65. He is 5 feet 8 in. in height, of nervous temperament; has blue eyes, and his hair now gray, was originally auburn. No. 3 experienced the first symptoms at 43; he is now 46. He has also a fair complexion, blue eyes, and light auburn hair. No. 4 was 42 years of age when he began to experience the pains; he is now 45. He is 5 feet 10 in. in height, and has a dark complexion, dark eyes and black hair. No. 5 experienced his first symptoms at 37, ten years ago. He has reddish hair and beard, blue eyes, and a strongly marked nervous temperament.

There is no history of constitutional disease in any of these cases. No hereditary tendency to nervous diseases appears to have existed in the direct or collateral branches of any of their families. The father of No. 4, was rheumatic and gouty—the only instance of an apparent predisposition to this disease in this collection of cases. Topinard* concludes, as the result of his investigations, that the only diathesis which can be considered as having any relation to this disease, is the rheumatic.

Sexual Disorders. It has been frequently affirmed, that sexual excesses are causative. It is difficult to obtain exact information on this point. So far as I have been able to learn, these patients were not different in this respect from other men in the same position in life. Trousseau† has made an observation which illustrates this question. He has shown that in some of these cases, the first symptom has been an extraordinary increase in the sexual appetite. This fact has probably given rise to the belief that the ataxia and other phenomena, were produced by the sexual excesses. More or less decided increase in the sexual appetite, occurred in these five cases, in the very beginning. This was especially the case with No. 1, in whom this symptom more conclusively than in the others, marked the origin of the disease. He was and is now, I believe, unmarried. The others are married, but it is a notable fact, that they ceased to *beget children* when the first symptoms commenced.

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**De L'Ataxie Locomotrice et en particulier de la Maladie appelé Ataxie Locomotrice Progressive. Paris, 1864, p. 371.*

*†Clinique Medicale de L'Hotel Dieu de Paris. Tome Deuxieme, p. 534, et seq.*

Symptomatology and Duration of the first period. No. 1, had satyriasis, spermatorrhœa, tingling and numbness of the feet and legs, and amaurosis and double vision. The satyriasis was soon succeeded by anaphrodisia and impotence. The dimness of vision and the double vision, suddenly disappeared at the commencement of the second period. He did not experience those peculiar pains so commonly present in this disease. The whole duration of the first period, commencing with the satyriasis, was only three months. The symptoms of the first period in No. 2, were similar in character, but extended over a much longer period. The state of the sexual appetite in the beginning, could not be accurately ascertained, but anaphrodisia soon occured, and absolute impotence was the final result. Violent pains, supposed to be rheumatic, preceded the other symptoms. These pains are localized in the inferior extremities, and especially in the left hip, so that disease of this articulation was suspected. No derangement of vision occurred at any period. No. 3 experienced, for more than a year, sharp pains in the extremities, and also deep-seated pains in the trunk, before the ataxia manifested itself. These pains, being sudden in onset, fugitive in character, and irregular in their recurrence, were supposed to be neuralgic. A decided decrease in sexual desire, and imperfect sexual congress were observed, but complete anaphrodisia did not occur. Dimness of sight, but no other ocular trouble, has thus far been present in this case. In No. 4, two years of neuralgic pains preceded the other symptoms. The pains had the two characters so frequently noticed in this disease: the first, deep-seated, dull, and heavy, pretty nearly constant; the second, sharp and sudden, temporary. The dull and heavy pains experienced in the lumbar region, in the thighs, and certain parts of the trunk, preceded the others, which attacked the legs and thighs. No ocular derangement occurred in this case. Spermatorrhœa, anaphrodisia and impotence, however, were experienced early. No. 5 began to have pains in the lumbar region in 1857, and soon after severe attacks of neuralgia along the course of the sciatic. These were succeeded by sharp, sudden, and fugitive pains in both inferior extremities.

The patient compares these pains to electric shocks. Anaphrodisia and spermatorrhœa did not occur until two years after the pains had been experienced. He admits that at the present time he is completely impotent. Derangements of vision manifested themselves in two years after the commencement of his malady. These consisted in amblyopia and double vision. They disappeared suddenly—in a night, he says—after continuing for several months.

SUMMARY. Pains, present in.....4
" absent in.....1
Ocular troubles, present in.....3
" " absent in.....2
Anaphrodisia, etc., present in.....5

SYMPTOMATOLOGY OF THE SECOND PERIOD. In No. 1, difficulty of locomotion and abolition of sensibility in the inferior extremities, quickly followed symptoms of the first period. Numbness and tingling of the feet were coincident with the ataxia. Almost immediately after the occurrence of these sensations in the feet, the distribution of both ulnar nerves became similarly affected. Loss of cutaneous sensibility and ataxia commenced in No. 2, in two years after the first symptoms declared themselves. They have not, after a lapse of twenty-five years, extended to the upper extremities. The first period in No. 3, was one year in duration. Ataxia and alterations of sensibility occurred in both extremities simultaneously, but were much more marked in the inferior. No. 4 has experienced muscular and cutaneous anæsthesia in the legs and thighs for two years, but ataxic phenomena are just beginning to appear. In No. 5, ataxia commenced in the third year of his malady, about the same time that cutaneous anæsthesia was observed.

Considerable variations are thus shown to exist in the duration of the several periods, and in the order of succession of the phenomena; but the phenomena themselves are remarkably uniform in character and manifestations. It will be unnecessary, therefore, to particularize the symptomatology of the second period as exhibited in each case.

As the most striking and obvious symptom is the *ataxia*, we may consider this first, without sacrificing the unity of the subject. It is a curious fact that when the disorders of locomotion began in each case, the patient was suspected of drunkenness. The peculiar oscillating gait of those afflicted with this disease, is well calculated to make this impression. The ataxia consists, of conrse, in a loss of the power, or in a difficulty to combine the muscles necessary to execute a given movement, but the muscular force is not lost. In each of my cases the muscular force was preserved. This is the case in the patient in whom ataxia of the inferior extremities, had existed twenty-five years. When he walks, supported on each side, his toes are pointed upwards, his legs describe a semicircle, and the heels strike the floor with great violence. When the leg is flexed on the thigh in either of my cases, considerable force—the patient exerting his will—is necessary to extend it. In other words, there is no paralysis of motion, but a disorder of voluntary movement—a loss of coördinating power.

The disorders of sensation are amongst the most curious phenomena of this disease. The sense of pain is abolished; the sense sf touch and of temperature abolished or perverted. These points are well exhibited in No. 3. Pinching of the skin with the points of the æsthiometer, excited in him a sense of coldness, but not of pain. The others may be pinched or pricked in the affected parts, without occasioning the least pain. A very peculiar sensation is described by No. 4. The brushing of his legs by a lady's dress, produces a sensation of pain, whilst a pin may be thrust in deeply without occasioning the least uneasiness. In addition to the anæsthesia, and the singular aberrations of sensibility, various referred sensations are experienced, of which, numbness, tingling, "fidgets," and sudden shocks of a painful character, are the most notable.

The sensibility of the muscles to pain and to the electrical current, is also abolished. These patients are deprived of the "muscular sense," and hence are unconscious of the position of the feet, unless they have them under observation. An exception to this statement must be made, however, in the case of No. 4, in whom the ataxia is just beginning to develop itself. The others are unable to stand with the eyes closed, but when they make the effort, oscillate from side to side, and finally fall.

SUMMARY.

| | |
|---|---|
| Tactile sensibility abolished in | 5 |
| " " present in | 0 |
| Sensibility to temperature present in | 2 |
| " " abolished in | 3 |
| Sensibility to pain, perverted in | 1 |
| " " abolished in | 4 |
| Ataxia developed in | 4 |
| " appearing, but not developed, in | 1 |
| Muscular sense abolished in | 4 |
| " " not abolished in | 1 |

THIRD PERIOD. Two only of these patients have passed into the third period—No. 1 and No. 3. N. 1 became unable to tie his cravat, or use a knife and fork, and No. 3 has now great difficulty in accomplishing these movements. There is no difference in the character of the phenomena in the different situations in which they are exhibited.

RESULTS. A result has been reached in one case only—in No. 1, who may be considered cured, after five months of treatment. The next are illustrating the long continued and progressive character of this singular affection.—*The Western Journal of Medicine.*

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## PHOSPHORUS IN LOCOMOTOR ATAXIA.

Dr. Dujardin Beaumetz has given phosphorus in the manner above described in four well-marked cases of loco-motor ataxia. In all the

cases a decided improvement took place; the step taken became less uncertain, the power of co-ordination was improved, and the patients were enabled to take long walks and to go up and down stairs.

The general sensibility was not affected by the treatment, except in one case, in that it was improved.

The eyes, which were more or less affected in all the cases, were not benefited by the treatment.

In addition, it was curious to observe, as one of the effects of phosphorus, in all the patients, a general contentment, a peculiar feeling of well-being, which made them desire the continuation of the treatment after they had once been submitted to it.—*N. Y. Medical Journal.*

## MEDICAL NEWS.

### ANECDOTES OF MALGAIGNE.

A good tale or two is told of Malgaigne in the *Gazette Medicale de Lyon.* "How do you proceed," he asked a candidate, "in performing the operation of extraction of cataract?" "I—I," hesitatingly replied the youth, "empty the anterior chamber." "Very well; and next?" The candidate, seeing himself thus encouraged, and believing himself to be on the right road; "And then I empty the posterior chamber!" "Capital; and then?" "I—I—I—" Why, you stick up a bill, *chambre à louer.*'" In the next the candidate was evidently a sharper fellow than this noodle. Malgaigne, interrogating him upon the rotation of the stomach in its conditions of vacuity and repletion, and on the relative gravity of the organ in these two different conditions, in order to put the question more precisely, said, "Now, sir, if you were called out to fight a duel, would you think it more prudent to breakfast before or not?" "By my faith, sir," replied the other, "I would breakfast before, because I could by no means be sure of being able to do so afterward." The last we give in the original. Examining a would-be *officier de santé,* he asked him how he would proceed for the extraction of the placenta. "Je tirerais sur le cordon." Et après?'' "Je tirerais sur le cordon." "Bien, mais si rien ne venait? "Je tirerais plus fort sur le cordon!" "Eh! Monsieur, une portière en ferait autant que vous."—*N. Y. Med. Journal.*

### HOW TO UTILIZE LEECHES.

The German doctors have lately been playing their leeches a droll trick —making one worm do the work of many. When the little blood-sucker has taken his fill and is about to release his bite, he is tapped; a small

incision is made in his side, that serves as an outlet for the blood, and he goes on sucking, in happy ignorance of the cause of his abnormal appetite, as long as the doctor pleases. Bdellatomy is the name given to the practice, and it is urged that it is not cruel, but contrarywise, since it does the leech a good turn by enabling him to enjoy his rich feast indefinitely. He does not die under the operation, but with proper treatment is soon healed, and may be incised over and over again There was once an alderman who wished he had been a camel, that he might have been blessed with the seven stomachs vouchsafed by nature to that animal. If such a gourmand still exists, let him seek surgical aid in some such treatment as that practised on the leeches, that he may eat and drink *ad libitum*, and feel no worse.—*Once a Week.*

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CASE OF POISONING BY CYANIDE OF POTASSIUM—RECOVERY.

Professor Taylor relates a case in *Guy's Hospital Reports*, for 1868. It occurred, as these cases usually do, to a photographer. The amount taken was estimated to be about three to five grains, dissolved in about two drachms of water. Immediately after swallowing it, he discovered his mistake, and had the presence of mind to follow it with about a half ounce of saturated solution of protosulphate of iron, and then hastened to a chemist's, in the neighbourhood, and took a mustard-emetic, which latter produced a tardy and incomplete emesis; so that it is altogether probable that he owed his life to the prompt administration of the sulphate of iron, which converted the cyanide and free hydrocyanic acid into insoluble Prussian blue. Three grains of cyanide have been known to produce death, especially when dissolved in water, where the conditions for rapid absorption are extremely favorable.—*Exchange.*

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POISONING BY THE ABSORPTION OF CARBOLIC ACID.

E. S. Machin, Esq., communicates a case in the *British Medical Journal*, for March 7th, where three persons in the workhouse had been dressed with carbolic acid instead of sulphur lotion for the itch. The patients were women aged respectively 23, 60, and 68 years.

The acid had been applied to the entire surface. A few moments afterward they complained of smarting pain and headache, after which they were taken with giddiness, and rapidly became insensible. The girl aged 23, and her mother aged 60, died in the course of forty hours. The third patient rallied in about four hours, and recovered in a few days. No post-mortem was made. The acid used was Calvert's carbolic acid for disinfecting purposes, and was, in appearance, dark and oily. About 6 ounces were used in "dressing" the three cases.—*Exchange.*

# Canada Medical Journal.

MONTREAL, JANUARY, 1869.

## THE ONTARIO MEDICAL BILL.

The *Dominion Medical Journal* in an article published in its December number, advocates the establishment of a central medical board of examiners. Laying aside every other consideration we regard this bill as unjust, and interfering with the vested rights of old and well established institutions. These institutions could have no reasonable ground of complaint, if an act were passed giving the General Council of Medical Education powers of supervision. The right of being present at the examinations is already accorded by McGill University, if not by other institutions, to parties interested in those exercises. These examinations are not with us conducted in a corner, and the University has every reasonable ground for opposing the degradation of its status. There can be little doubt that depriving the teaching bodies of examining their students is wrong in principle, and will lead to laxity, if not the admission into the ranks of the profession of a number of indifferently educated men.

With all due deference to the five members of the committee who "belong to no clique, but are simply gentlemen in country practice in the Province of Ontario," we hold that even they although earnest and good men, are not as capable of searching out the knowledge or deficiency of a candidate for medical honours, as any five men taken from the teaching body of the profession. They may think so of themselves, for it is a characteristic of most men to have an unbounded good opinion of their own abilities. The Local Parliament in Ontario have no power to legislate in any way against the vested rights of the Colleges and Universities in Great Britain. These vested rights are secured to them by the amended imperial medical act of last session, so that any bill passed by the Local Legislature of Ontario interfering with that Act, will have to be reserved for Her Majesty's sanction before it becomes law.

In alluding to an article which appeared in the November number of this journal, in which we stated that the mass of the profession in Ontario is opposed to the formation of a central medical board of examiners,

the *Dominion Medical Journal* remarks, "we say advisedly, in reference to such statements, that the great mass of our profession in Ontario, with the exception of a few connected with the schools, are in favour of a central board of examiners." This narrows itself down to a question of assertion as it is in direct contradiction to the statements made by us and from which we do not depart. We have means of knowing the sentiments of many of the leading men of the profession in Ontario and furthermore are personally known to a large number of men throughout that Province, men with whom we have come in contact professionally during the last twenty-five years, and we repeat that the assertion of the *Dominion Medical Journal* is simply incorrect. We do not wish to hint that the editor of the *Dominion Medical Journal* has willfully hazarded a mis-statement, but simply that he is not aware of the feelings and opinions of the Profession in Ontario on this question of a central board.

In our last number we stated that the members of the Medical Council had surreptitiously introduced the bill and we have good cause of complaint against them in having endeavoured to introduce into the House and pass through its several stages a bill having such serious influence for good or evil, without having followed the usual course of making public by advertisement their intention so to do—and why, we would ask, this secrecy? If it is a good thing, the profession in Ontario could have no objection to its introduction, but if, as it will, as surely as it becomes law, lower and degrade the profession in that Province, the right thinking members of the profession would oppose its introduction. This was well known to the framers of that bill and they could not afford to allow the terms of the bill to leak out, until after its sanction. Indeed so secretly and jesuitically was this managed, that it was by mere accident it came out at all; even the corresponding Editor of this journal, who resides in Toronto, was not aware of its existence in the early part of the month of November, and the writer could not procure a copy in Toronto, a friend of his informed him that there were no copies of the bill printed. This we know to be an error, as we had seen a printed copy, but they were so few and far between, that one could not be procured for us as public journalists. But we have done with the matter, and all we can say is, pass the Bill gentlemen and welcome, but as a graduate of a Canadian University we could not do less than utter a warning cry of shame at the five members of the Medical Council, some of whom are graduates, but who do not shrink from seeking to degrade their Alma Mater, and in doing so depreciate the value of their own diploma.

## THE "GOODENOUGH" METHOD OF SHOEING HORSES.

We have selected the following important article from the columns of the London *Times* and we fully endorse the views herein contained, as we have always regarded horse-shoeing as practiced generally, to be a species of torture of a dumb animal:

Among the stir and bustle of an age of progress, the art of shoeing horses may be said to have remained in its infancy, little noticed by the general public and the despair of those whose duties or interests rendered them familiar with the evils consequent upon the accepted methods. Cavalry officers and veterinary surgeons have been well aware that the shoes of a horse are the sources of many, if not of most, of his maladies, and have sought to diminish the ill effects of shoeing by various modifications of pattern and of nailing. The inventors of such modifications have generally been compelled to admit that the successful application of them was dependent upon the careful observation of many minute particulars, and have been unanimous in placing the blame of failure upon the shoulders of the farrier, whom they described as a man too ignorant, or too prejudiced, or too careless, or too awkward for the proper performance of a task which their instructions would render one of extreme delicacy. Unfortunately, the farrier was indispensable; and the manifest nature of his calling was such as to require qualities with which more or less of ignorance and prejudice is usually found to be associated. Hence the comparative ill success of the methods of Coleman and others was supposed to be due to the want of the skilled labour required for their proper application, and horsemen, especially in the provinces, have generally been content to put their trust in the practical tact of the farrier reputed to be the most skillful in his district. The result is not only that unsoundness is lamentably frequent, but that the natural action of a horse is almost unknown. The London hack or the brougham horse of second quality, goes over the stones with a gait like that of a man in tight boots, and with very imperfect security of foothold, until, while still in the vigour and prime of his natural life, he is degraded, by artificially-produced unsoundness, to the tradesman's cart or the cab-rank. In the omnibus-horses of the metropolis, called upon as they are for moderate speed with heavy loads, the effects of bad shoeing are even more readily apparent. The horses of the London General Omnibus Company are always less than seven years old at the time of purchase. They are well fed and well cared for, and their work is a journey of twelve miles daily, with, in any case, one day's rest in every three weeks, and more if their condition seems to require it. The average duration of their fitness for work is only four years, and seven per cent. of them are always upon the sick list. It is not too much to say that they can

never assume a natural position. Their hind shoes are generally furnished with large heel calks, which elevate the heels an inch or more, and place the bearing upon a tripod, formed by those calks and by the point of the toe. The frog, intended by nature to be an elastic organ, and to be the medium through which the foot feels the ground, is so lifted up that it can never exercise its functions. It becomes hard, dry, and useless, and is pared away by the farrier at each renewal of the shoes. On a declivity, or when checked, the horses slip and stagger; and when at rest their bent knees and quivering limbs testify to the pain and weariness produced by the unnatural attitudes in which they are forced to stand.

For some few years past evils of this kind have attracted particular attention in America, and in 1843 and 1857 patents for certain improvements, and especially for machine-made shoes, were taken out by Mr. Burden. In 1860 Mr. Goodenough (well known in this country by his association with Mr. Rarey) invented and patented the shoe we are now about to describe, and has succeeded, we think, in securing all necessary protection to the hoof, and in removing, or reducing to a *minimum*, the bad effects of earlier methods. The principle laid down by Mr. Goodenough is that the shoe should resemble and preserve as far as possible, the natural shape of the hoof of which it is a continuation. The unshod horse has the under surface of his foot on a generally level plane, the frog and the whole margin of the hoof in contact with the ground, and the surface of the sole, between the frog and the margin, somewhat raised by its own concavity. The Goodenough shoe is made precisely to follow the outline of the hoof for which it is intended, and to reach exactly to the bars, never projecting at all, beyond the heel. Its upper surface is perfectly plane and true; its under surface is generally concave from the outer to the inner margin, the outer margin having, however, a narrow flat bearing upon the ground, and this bearing is interrupted by portions of the margin being cut away, so as to leave a central toe calk, and two smaller calks on either side. The elevation of these calks is considerable, and their general level is the same, so that they may be compared to a series of short claws on the under surface of the shoe. In the notches, or spaces between the calks, the nail-holes are bored, and counter-sunk, so that the nail-heads are completely buried in the shoe. For frost, shoes are made in which the calks have no flat bearing, but are brought up to a feather edge. The inner margin of the shoe is thin, so that its outline passes insensibly into that of the sole, and presents no projections by which stones or snow can be retained. The method of preparing the foot and of applying the shoe is as follows:

In the first place, a shoe which precisely fits the outline of the hoof is selected from the stock. If a proper fit cannot be found, any slight

alteration is made by a few blows on the cold iron, or, if heating be necessary, the shoe is made cold again before it is applied, and care is taken that it remains perfectly level and true. The farrier then prepares the hoof by cutting or rasping away the surface of that portion of the crust on which the iron will rest, leaving the centre of the sole and the frog and bars untouched. Having given what he judges to be a true level to this marginal seating for the shoe, the shoe is applied cold, and the hoof is rasped again and again until horn and iron come into perfect contact in every part. As a guide to the use of the rasp, the surface of the shoe is ruddled, so that any portions of horn not touched by it remain uncoloured. The adjustment being correct, the shoe is nailed on in the ordinary way and the process is complete.

When the shoes are put on for the first time it will often happen that the frog, dwarfed and deformed by previous ill-treatment, does not reach the ground at once, and for some hours, or even for a day or two, the horse may experience the same kind of inconvenience that would be felt by a man who was taken out of very high-heeled boots, to which he was accustomed, and made to walk on level soles. But a very short time restores the muscles of the legs to their natural equilibrium and relieves the latter discomfort, while, after a few shoeings, the frog reaches the ground fairly and fully, forming an elastic wedge which gives the horse a conscious and safe foothold upon every surface. The sole also grows somewhat within the circle of the shoe and forms a shoulder by which the firmness and security of the latter are greatly increased, so that fewer and smaller nails are required. At first, too, it is necessary to have a considerable thickness of iron, in order to supply the place of the horn usually removed by the excessive cutting of the ordinary farrier; but when the hoof has grown to its natural proportions, smaller and lighter shoes will be sufficient.

Mr. Goodenough's system has only very lately been introduced into this country, and the arrangements for its general application are not yet complete. It has been in use for two months upon 200 horses belonging to the London General Omnibus Company, and employed in drawing those Chelsea Omnibuses that stand at the Chelsea end of their journey. It has quite recently been tried upon a few horses in the Royal stables. It has been in use in America for about seven years, and comes recommended by a singular concurrence of testimony from large and small employers of horse labour, from omnibus and railway companies, from cavalry officers, from surgeons, human and veterinary. The surer foothold is said so much to diminish labour that horses are kept in condition on an appreciably smaller quantity of food; and diseases of parts from the knee or hock downwards are said almost to have disappeared

from the stables. Apart from this testimony we will relate what we have ourselves seen.

A number of horses of the London General Omnibus Company, some that had been shod for two months on the Goodenough system, and some shod in the old method with high heel calks, were brought together for inspection. Of the latter horses, all stood resting one hind foot, or first one and then the other. Of the former, all, without exception, stood still and quietly on all four feet at once, without a sign of restlessness or discomfort. A hind shoe with heel calks, that had been worn for some little time, was removed, and a new Goodenough shoe to fit the same foot was selected. The Goodenough shoe was lighter by 1¼lb. than the one removed to make way for it. At omnibus pace, a horse lifts each foot about six inches, and takes, with all four, about 60 steps in a minute. A set of Goodenough shoes would, therefore, save this particular horse, every hour, the labour required to lift a ton weight to the height of one foot. A fine old white horse condemned by his owners as hopelessly lame, useless, and worn out, was bought by Messrs. Robinson and Cottam, the manufacturers in England of the Goodenough shoe, for £3. With no other treatment than the shoeing, he speedily and perfectly recovered, and now trots cheerfully along with a ton and a half behind him or stands quietly on all four feet when at rest. Another somewhat similar purchase by the same gentlemen, a horse with one fore hoof completely split, has recovered in a manner no less remarkable. But, in order to form an estimate of the obvious merits of the system, there can be no better course than to take a post of observation a little to the west of Hyde Park-corner and to watch the horses of the Chelsea omnibuses trot down the declivity and pull their loads up. It must be borne in mind that only a portion of these omnibuses have horses shod in the new manner, but these are distinguishable at a glance by the absence of heel calks on their hind shoes.

Mr. Goodenough claims for his system the negative merit that the shoe, being applied cold, does not injure and weaken the horn by burning, as in the common method. He claims the positive merits that "it prevents slipping, over-reaching, and interfering, cutting, or picking up stones, balling snow or mud, contracted feet, corns, sand cracks, thrush, springing of the knees, shrinking of the shoulders. It also prevents the nails striking the ground while the foot is sensitive from shoeing. A horse will draw with it a greater weight and travel further." From careful examination of the method, and, so far as they are yet to be seen in this country, of the results of its employment, we are of opinion that these claims are scarcely, if at all, overstated, and that Mr. Goodenough will confer the greatest benefits alike upon horses and upon those who

own or use them. Another advantage of the system is one that will be greatly felt in the hunting field. The hoof, having its natural form and surface preserved, draws out of clay or mud without the suction by which so many ordinary shoes are loosened, and so much extra labour is entailed upon the horse. It has been calculated that this suction may be nearly 1lb. per lift to each foot, in addition to the weight of the shoe; and its total amount at the end of a day's work would be such as to seem scarcely credible.

We have yet to speak of the manner in which the Goodenough shoe is produced, and this to many persons will not be the least interesting portion of the subject. It is manifest that a shoe with a perfectly true and level surface, and of a regular pattern, can only be made economically by machinery. Accordingly, machinery has all along been employed in America, and Messrs. Robinson and Cottam, the engineers, of Cannon-street and Battersea, who have undertaken to make the shoes for this country, found it necessary to follow the American example. Mr. Cottam, however, designed original machines of his own, and a plant consisting of five parts will be able to turn out 8,000 pairs of shoes in a week. Iron is sent from the North in long straight bars, rolled to the general outline of the shoe, with the interrupted margin for the calks, and the hollows for the nail heads. These bars contain, in width, the material for two shoes. The first machine cuts the bars into lengths; the second punches the nail-holes at the proper degree of obliquity, so that the nails cannot be driven into any sensitive part of the foot, the third splits the lengths so as to separate each into the two shoes that it is intended to form. The separate portions are then heated, bent round a kind of mould to the proper shape, and, lastly, pressed to the required level. The size of the shoe is determined by the length of the bar, the shape by that of the mould around which it is bent. In the bending machine this mould can be changed at pleasure, and Messrs. Robinson and Cottam will eventually have a sufficient number of moulds to enable them to fit any hoof. At present they have only the more common sizes and forms, and hence it is sometimes necessary to alter the shape of a shoe upon the anvil. But the ultimate result will be that the factory at Battersea will become a gigantic ready-made shoe shop for horses, and that any horse will be fitted there by sending a cast or tracing of the outlines of his hoofs. Gentlemen will then be able to keep a stock of shoes for their horses at their own stables, and to have them put on there by the farrier, who will need no forge. The work of the farrier will indeed, be so much simplified that in large stables it will probably be desirable to have a groom instructed, and to make the renewal of the shoes a portion of the ordinary routine of the establishment.—*London Times.*

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Calabar Bean.* Substance of Lectures delivered January, 1869, in the University of McGill College. By WILLIAM WRIGHT, M.D., L.R.C.S., ED., Professor Materia Medica.

Calabar bean, which has within a few years back obtained celebrity for its remarkable action as an ophthalmic agent and as a remedy in tetanus, owes its activity to a peculiar alkaloid called *Eseria*, or *Physostigmine.*

Eseria, or physostigmine is contained in the kernel or white interior, and probably is confined merely to the cotyledons.

It was separated in 1863 by Jobst and Hesse. A lengthy description is given of the mode of extracting it, but the chief steps in the process are to make an alcoholic tincture of the beans,—to evaporate this down so as to leave a thick residue,—to digest this remainder in sulphuric ether,—and lastly to drive off the ether from the solution thus got. The substance that remains behind is the alkaloid.

It appears at first as oily drops, but subsequently becomes more consistent. It has not yet been crystallized. It is commonly seen as a brownish yellow mass, having the usual characters of alkaloidal agents. As regards solubility, it dissolves readily in acids, in solution of soda or ammonia, in ether and alcohol, but it is only sparingly soluble in cold water. By contact with acids it is neutralized and salts are formed. These have either a red or blue colour of dark tint. Like the volatalizable alkaloids, when heated with potass, it is more or less dispelled in vapour, which acts on colouring matter in the same way as ammonia.

Its tests are yet to be discovered. From its solution, however, tinct. iodine and sol. iod. potassium throw down a copious orange precipitate, The proportion in which it is present is probably very scant, as twenty-one beans are said to yield only a little alkaloid.

It is so exceedingly powerful that when applied to the eye of a rabbit it rapidly caused marked myosis of the pupil, and when given to animals it has induced effects as dangerous as those of atropia or other agents equally potent.

For therapeutical purposes, it is safer to substitute some of the preparations of the bean.

From the sample before you,—for which I am chiefly indebted to Dr. Fraser, of Dublin, through Dr. F. W. Campbell, and to Dr. Howard,—you may judge of the characters of the bean which contain this active principle. The bean is somewhat like a diminutive kidney in shape, nearly as big again as a common horse-bean. In the dry state it weighs about a drachm, measuring a little more than an inch in length and three-fourths of an inch in breadth. It presents two flat surfaces and two borders, the longer one convex, the other concave. Of these, the convex or placental, as it is called, is the most remarkable. It is indented by a broad groove, which does not run the whole length in one direction, and in the other stops at a slightly raised circle, which is marked by a longitudinal fissure. The edges of the groove are raised, and are paler than the surrounding parts, the bottom usually darker and striped by a pair of parallel lines passing from end to end.

The spermoderm or envelope of the bean varies a little in colour; commonly it is reddish-brown, less often it is cineritious; there are also differences in shade between fresh and dried, young and more mature specimens. The exterior feels rather rough, is hard in texture, not readily sectile, and has a slightly polished aspect, Microscopically, this envelope or integument is resolved into three tunics;—the outer or epidermoid shows rows of columns side by side terminating in clubbed extremities,—the middle, or cellular, formed of piles of starlike cells, becoming more and more condensed as they approach the former,—and the innermost, or dermoid, spread beneath the latter as a basement of dark ligneous membrane.

The kernel is of a cream colour, having an odour compared to that of laburnum seeds, but not having any peculiar taste. It is devoid of bitterness, acrimony, or aromatic flavour. It might be eaten without exciting any suspicion of its toxic power, and if mixed with food would cause no change by which it would be detected. When dry, it is hard, brittle, and easily powdered.

The embryo is of large size, the cotyledons lay close to the inside of the spermoderm, but are separated centrally by a respiratory cell, or space of considerable size, filled with air. It communicates with the outside by a minute chink, which may be shut or not as the sides are closed or opened.

Lastly, the microscope detects a loose areolar texture, with hexagonal loculi, each holding from one to six starch granules of large size.

The average weights of spermoderm and kernel in a single bean are 15 and 35 grains respectively.

Calabar bean readily yields its virtues to rectified spirit, and this is the menstruum chiefly used in making its preparations. In the second edition of the British Pharmacopœia are directions for making an extract, the *Extractum Physostigmatis*. This is the only officinal preparation. It is a strong tincture, reduced by distillation and evaporation to the consistence of thick treacle. One pound of the bean in coarse powder is exhausted by four pints of rectified spirit by digestion, percolation, and expression. The resulting liquid is then thickened. The bean should be steeped for a couple of days with one-fourth of the alcohol, the mixture ought then to be transferred to the percolator, and when the dropping stops, the remaining three-fourths of the spirit is to be gradually put into the percolator. The pulp is to be well squeezed into the filtered liquid. Inspissation is easily effected by a water bath. Here is a sample of some expressly made for me. It has a dark brown colour. The dose is gr. $\frac{1}{16}$ to gr. $\frac{1}{4}$. This extract is preferred to other preparations, because it is the most reliable and the least likely to vary. Next to the active principle, it is the strongest form in which the bean can be given. It may be given as a pill in union with different excipients, as bread crumb, soap, vegetable extracts, or pill masses. It may also be given as a mixture, with water, as the two rubbed up together make a mixture of a white appearance that becomes pink upon exposure to air and light.

There is another extract, sometimes referred to, the *Aqueous*. It is got by evaporating to a proper thickness a strong decoction.

An *acetic* extract may also be procured by using distilled vinegar or dilute acetic acid as the exhauster.

The best preparation after the alcoholic extract is a *tincture*.

Different tinctures are mentioned. Dr. T. R. Fraser's is the most powerful. ℥ ij. of product only are obtained from ℥ i. of kernel. The latter is pulverized minutely, then soaked for two days in half the amount of rectified spirit to be used, next the mixture is put into a percolator, and the other half of the spirit is added when passed; through, if there be not enough tincture to make up the measure to twice the proportion of the kernel used, more spirit is to be added to make up the deficiency that may exist. Every ℥ i. of kernel is acted on by ℥ ij. spirit, or as much as will yield ℥ ii of tincture. Here are several ounces of it which I had made according to Dr. F.'s directions. You notice it has a beautiful, clear, transparent look, of a pale sherry tint. It differs from

other preparations in being made with the decorticated kernel. The others are made with the entire bean, both spermoderm and kernel. It is therefore very active, as the active principle resides chiefly, if not exclusively, in the kernel. An objection to Dr. F.'s formula is that the quantity of menstruum ordered is not enough to exhaust the kernel of its energy. Dose M v.; this is equal to gr. iij. of the kernel. M xv. have been given without inducing extreme effects.

A second tincture distinguished from the former, by being only half the strength, is made from ℥ v of the bean, in fine powder, and Oj of rectified spirit, by maceration for a fortnight.

From the tincture is made the *charta* or paper, intended for ophthalmic purposes. Soft bibulous paper, or very much better, gelatine or cacao butter is dipped in the tincture and then set aside; when needed, a disk about half the size of a finger nail is cut of, and put under the lower eye-lid. The gelatine or cacao butter, as I said, is very much the better substance as it dissolves away in situ. When paper is used it should be removed after ten minutes.

While upon the preparations I may add that the *powder* of the bean has been used in the dose of gr. j—iv. Gr. v. have induced alarming symptoms. Gr. xii are the largest amount, I know of, from which recovery has followed. Prof. Christison on one occasion experimented upon himself with this formidable quantity. The powder is objectionable, for when long kept it is apt to vary in strength from dynamical changes or the attacks of mites; it is also slower in acting from being less quickly absorbed than the extract or tincture.

*Suppositories*, each containing half a grain of the extract, may be made with oil of Theobroma and white wax. And lastly, an *infusion* has been applied as a parasticide against pediculi.

The plant that furnishes the bean is found in Western Africa, chiefly at a small settlement, Calabar, after which the bean is called. This settlement is on the left shore of the old Calabar river. The plant is a runner or climbing herb of large size, ascending upon the neighbouring trees and bushes; by means of these it often overhangs the river,—and the beans, when ripe, drop down, and floating upon the river, considerable numbers may be gathered from its surface. The plant is also found along the banks of other streams. It thrives best in a swampy soil. It is called *Physostigma Venenosum*, and received its name from Prof. Balfour, of the Edinburgh University. The bark is harmless. The sap from a fresh wound is first astringent and then acrid to the taste. The leaves are eaten by goats without any deleterious effects ensuing. The foliage is profuse and forms rich festoons. The flowers are decandria diadelphia,

of a purple colour, veined with pink markings, and of a butterfly shape. They are most remarkable for a large hood or sac which extends along the upper part of the convexity of the style and covers the stigma. It has been compared to an admiral's hat set in a jaunty manner.

Calabar Bean is of great interest to us as A POISON. It is used as a judicial poison at Calabar in the so-called "trial by ordeal," after which the bean is called ordeal. Other names for it are the Eseré or Chop Nut. This trial is set up to find out if a person accused of a crime be innocent or guilty of the charge. Beans are administered to the accused, if he die the death is thought to serve him right and prove his guilt, but if he vomit and get well he is declared innocent. The mode of proceeding is this: a council of the chiefs, presided over by the "fetish man," is called, the charge heard,—and in self-defence an appeal is made to the bean, each chief then lays one down upon the ground, the accused is told to take up at least two, sometimes a great many more. There and then he is bound to chew and swallow the prescribed amount, and afterwards he is carried to the town hall or Palaver House when a further dose is forced into him in the shape of an emulsion or infusion by way of enema or draught. Trials of this sort are very numerous, upwards of a hundred and twenty persons out of a hundred thousand have been thus sacrificed annually. The only check against still greater frequency is that if the accused escape he turns upon the accuser, who has to take his turn with the chop nut for having been false or to show he was not actuated by spite. The Fetish man has the right to stop the affair at any stage and his prejudices may influence the result, for it is supposed he can tamper with the beans before they are taken so as to deprive them of much of their power. The most improbable causes suffice for an impeachment. When any one gets sick or meets with a misfortune of any kind, it is believed to be due to some enemy of his who has used "witchcraft," or "freemasonry," against him, or cast an evil eye upon him, and whoever is suspected must succumb. One instance, I read, was of a child of about eight years of age. He had been amusing himself and his little companions by indulging in some extravagant gestures. These were taken to mean he was up to "freemasonry," next he was accused of being at the bottom of certain proceedings of a frightfully cannibal description that had lately occurred, he was then supplied with chop nut, and death soon closed the scene.

Sometimes the beans are taken for suicidal purposes or to try one's powers of enduring their effects.

In 1864, about seventy children were poisoned at Liverpool by eating the beans by mistake. A ship had lately arrived from the West

coast of Africa, out of her hold some rubbish was swept, and the children, in searching through it, found what they took to be edible nuts, but which were in reality Calabar beans. The children were mostly under the age of ten. They cracked the beans and ate the kernel, each taking from half a bean to six beans. Only one case, where four beans had been eaten, was fatal.

The *symptoms* of poisoning vary according to the amount taken. When this is excessive, no sensation may be felt for about ten minutes, the victim becomes thirsty, often, extremely so. In a few minutes more, the power of swallowing is lost, mucus escapes from the mouth, next the ability to speak fails. Sensibility and intelligence seem to remain intact. Twitches of a convulsive kind occur in the muscles of various parts but principally of the back. Syncope sets in, complete paralysis of the heart follows, and death ensues in about thirty minutes.

Where death is slower, from the dose being smaller, the chief features are rapidly spreading paralysis of the voluntary muscles. Asphyxia succeeds. In these cases the pupils become contracted, and the pulse may be felt very feeble for some time before it ceases.

These two classes illustrate the two ways in which it is said to kill, by syncope and by asphyxia.

When death is still further retarded, much gastro-intestinal disorder is often noticed towards the latter part of the case, shown in nausea, severe griping and purging. The dejections may have a watery character, or present a dirty white semi-fluid appearance.

Should recovery take place, there is early vomiting, the weakness rapidly passes off, and the only remaining symptom is headache which ceases after a good sleep.

*Post Mortem*, the evidences are chiefly negative. In the stomach there are no marks of the work of an irritant; the gastro-enteritic mucous surface generally shows no unusual vascularity. The intestines have been found to contain the same whitish substance found in the discharges, passed during life, and derived from the beans that had been eaten. The condition of the heart and other large organs is either that in which they are found in syncope or in asphyxia, according as to whether the death has been rapid or more tardy. Except, then, in the whitish ingesta, and that only when the beans have been taken in substance, there may be nothing to declare the cause of the poisoning, and were these expelled, as they would be by long continued purging during life, no evidence whatever would be left of the cause.

The *tests* for a preparation of Calabar Bean are of two kinds: one to bring out its characteristic actions on the pupils and muscles;

the other to induce certain precipitates or changes of colour. In toxicological investigations, a liquid fit for testing may sometimes be got by exhausting the contents of the stomach by alcohol. Solid substances may be digested at once in the spirit. Liquid substances require to be first concentrated. The pseudo-tincture thus obtained should be percolated, and the filtrate evaporated in the manner of making an extract. If the product contain Calabar Bean, a little of it applied to the eye of a small animal will contract the pupil; and injected under the skin it will produce a flaccid weak state of the limbs. Again, if diffused through water: 1st, ammonia turns the solution first yellow, afterwards (in a few hours) green, and eventually blue. 2nd, persalt of gold, as the terchlorid, throws down a purple precipitate, from which metallic gold may be separated. 3rd, with sulphuric acid and bi-chromate potass, or peroxid manganese, a violet which changes to red,—a deposit falls and leaves a clear, yellow fluid above. This last test is something like the colour tests for strychnia, but the latter is done in a different way and is marked by a greater variety of colours.

The *treatment* of a case of poisoning differs according to the phase it wears. If asphyxia threaten, the mouth and throat should be cleared of mucus that may have accumulated, artificial respiration established by Silvester's method, and mustard applied over the spine. Electricity along the course of the phrenic nerve has been recommended. If the symptoms be less urgent, the stomach is to be emptied by the pump, when a liquid preparation has been used, and by an emetic, as sulph. zinc, when the bean itself has been taken. When allowable, the pump is always preferable if there be much paralysis. Warm diluents should be freely used to dilute and wash out the poison. After this has been thoroughly done, I would advise small doses of tinct. nux vomica, a first dose of m iv. then m j. every fifteen minutes or half hour, till improvement set in, when the frequency of the dose should be carefully diminished. Stimulants, as brandy, will generally be serviceable.

Another point of interest about Calabar Bean is its ACTION UPON THE EYE. If the extract be diluted with glycerin, in the ratio of one to four, and a drop of the compound be applied to the eye by a camel's hair brush, or the paper, before described, be inserted, the following effects occur:

A.—Contraction of the pupil; perhaps so great as to reduce the aperture to a mere speck or a state of occlusion. It begins in about ten minutes, often attains to a maximum in 30 minutes, and lasts about three days, subsiding gradually. It is limited to the eye to which the application is made. The pupil of the other eye is often slightly dilated. No

change is said to ensue from painting a solution over the temple or eyebrow. Contraction occurs in both pupils when the remedy is taken internally, but it is not so marked nor so continued as that from the direct use. Calabar Bean contracts the pupil after it has been dilated by atropia or belladonna. It is such a strong anti-mydriatic that when the pupil is dilated to the full by atropia, a free application has brought it down to the size of a small pin-head. The contraction can be explained by supposing that the radiating fibres of the iris are paralysed, and affording no resistance to the sphincter or round fibres, the latter have it all their own way and contract. The paralysis of the radiating fibres is probably the result of a primary depression transmitted to the naso-ciliary branches of the ophthalmic nerve which has a spinal origin, and supplies these fibres. This transmission may proceed from the ciliary ganglion when the remedy is used locally, or when it is taken internally from the spinal cord. The round fibres are furnished by a cerebral nerve (the short root of the third) but Calabar Bean does not affect them, its action being purely spinal. On the other hand belladonna acts on the cerebral and not on the spinal division of the nervous system. The greater intensity of the local over the general action may be due to more of the influence being carried straight to the ciliary ganglion. As a myosic or contractor of the pupil Calabar Bean moderately used is found very serviceable in restoring the normal size of the pupil after dilitation by atropia when required.

B.—Calabar Bean causes more or less impairment of vision, not so much from the less light admitted through the diminished aperture, as from an action upon the ciliary muscle, by which the acommodating power of the eye is deranged, and the refractive state of the eye becomes increased, in consequence the person, under the influence of the agent, is made short-sighted or myopic. Except that the near point is closer to the eye, vision is good, and clear within the shortened range. This action is posterior to the former, it begins as soon as the pupil contracts; it is shorter in duration, passing off in about six hours; and of the two is the more important. Here again the bean is the antagonist of belladonna; the latter, as you may recollect, also occasions a change of acommodation, but, it is of the reverse kind, *i. e.*, presbyopia. When the eyes are in dissimilar states, as after the topical use of the bean, one myopic the other not, asthenopic symptoms necessarily arise from using them together in binocular vision. As a myopic agent, the use of Calabar Bean may be beneficial in improving sight in cases of presbyopia from natural causes, or to restore it to the normal condition after atropia, or in certain forms of disordered acommodation from affection of the ciliary muscle.

C.—The colour of the iris is occasionally rendered paler than usual.

D.—Slight congestion of the coujunctival vessels may appear,

E.—Twitches of short duration have been noticed in the orbicularis palpebrarum.

F.—Pain or a sense of tension in the supra-orbital region has been complained of.

G.—Its first contact with the eyeball is apt to draw forth a slight flow of tears.

H.—Painted on the outside of the eyelids, a degree of immobility follows. These last effects are commonly very transient.

Other *topical effects* have been noted after the application of Calabar Bean elsewhere than the eye, but they are comparatively of little importance. Placed upon the skin, it induces no irritation, after about half an hour there is some anæsthesia so that the part may be pricked and very little pain be felt. In contact with exposed muscle, during vivisections, the contractility of the fibres is first impaired, and then lost for a time, as shown by irritating them either directly or through the nerves they receive. Introduced within certain tissues, as the serous and cellular, it excites congestion, but more from being a foreign body than from any specific property.

Let us now consider the *internal actions* of Calabar Bean. If a *small* dose be swallowed, in about five minutes afterwards a peculiar feeling is felt at the pit of the stomach like that caused by bolting a piece of solid food of too large size. Though slight at first, the sensation gradually increases till it grows painful. Next a feeling of dyspnœa supervenes, dizziness follows, and in a short time more or less loss of muscular strength in the extremities. When *larger* doses are taken, these symptoms are intensified, and there are added to them twitchings of the fibres of the pectoral muscles, dimness of vision, flow of fluid in the mouth, and perspiration. Of the *after effects* dizziness is the most prominent; it passes off after a night's sleep. The heart's action has been found to be tumultuous and irregular.

Besides these symptoms, medicinal doses of Calabar Bean induce the pupils to contract, lessen the force of the circulation by weakening the heart's force, and, if often repeated, they stimulate the intestinal glands and prove aperient.

In morbid states they are decidedly anodyne and calmative, and as such are effective in allaying nervous irritation. Intelligence is not affected.

Of the symptoms so far mentioned, several may be referred to *increase of secretion*, particularly of the perspiratory, salivary, and intestinal

glands; the discharges that follow are occasionally very free, producing profuse sweating, insalivation, and catharsis. A copious flow of tears has likewise been seen. These hypersecretions are due to a common mechanism, and appear to arise from, 1. congestion due to gradual slackening of the pulmonary circulation, producing a temporary increase of the functions of the organs from which they proceed, and 2, relaxation of the walls of the capillaries, part of a general muscular relaxation, whereby they are more fully filled with slowly moving blood.

This leads me to speak of another point of special interest about Calabar Bean, viz: its power to induce MUSCULAR PARALYSIS.

The part where Calabar Bean exerts its distinctive or primary influence is the spinal cord,—as we have before seen, its action on the eye tells this, showing that its operation is spinal not cerebral. It acts upon the anterior or motor column so as to suspend or deaden its energy, or reduce the activity of its function. As a result of this, the power of the part to convey impressions to the motor nerves is impaired or lost, and the muscles they supply are not furnished with the stimulus necessary to excite or accomplish strong or normal movements. This being the case, paralysis of motion occurs. No other explanation will account for the fact, as we shall understand by reflecting upon the peculiarities that characterize the Paralysis.

1. The powerless parts are those that receive their nervous supply from the spinal cord and its nerves;—the muscles of the extremities and of respiration are most enfeebled;—and the paralysis is primarily and always seated in the striped muscles.

2. The cause is not cerebral, for the paralysis is not unilateral, as in hemiplegia where there is a cerebral cause, but both sides of the body are involved as in spinal palsy. Again there is no failure of volition; the will is strong, but a difficulty lies in the way of carrying out its purposes: a person under Calabar Bean may have strong desires to move, but there is a want that prevents him from being able to do so; he may make the attempt, fail of his object, try again and fail again,—and perhaps after several failures at length succeed. Once more, the mind exhibits no defect, it is clear and active in all its manifestations.

3. The mechanism of the paralysis may be easily conceived by assuming that the difficulty or want, just referred to, removes the voluntary muscles from the influence of the will, and that the difficulty or want consists in a suspension of the function of the motor tract, by which it does not conduct the impulses of the will through the cord to the muscles, so that the mind may strike the corpus striatum (the cerebral cent of the voluntary nerves), but this striking is either not felt or not

sent further on. The motile function is inactive, polarity narcotized, and diastaltic movements can necessarily be but very feebly excited.

4. The paralysis cannot be exclusively owing to poisoned blood, as some might think, because the muscles implicated are affected in an order the reverse of that which would be the case if it had such an origin. Were it of blood origin, those muscles would be affected first, and mostly, which were first irrigated with the poisoned fluid, as it was brought to them in the course of circulation. It is, however, found that this is not so. The lower limbs are first paralysed, then the upper, then the trunk, then the neck. In short, the paralysis creeps up from below.

5. There is no fault in the muscles. They retain their normal contractility unimpaired, and still respond to direct irritation when artificial stimuli are applied. The paralysis is commonly preceeded by twitchings or tremblings of the muscles generally, in the lower animals these are often convulsive.

6. The paralysis is like that of Conia in many features, except in the absence of the twitchings in the latter; and Conia is admitted to act upon the motor tract of the cord. A resemblance is also said to exist to the effects of Woorara.

There are still a few more particulars concerning paralysis from Calabar Bean, which I have kept back till now, as, at first they seem not to fall in with the explanation given. When movements occur, they have sometimes been un-coordinated; again, the palsy has been found to include the unstriped muscles; and, furthermore, the functions of the brain may be disturbed. None of these, however, really constitute objections to the explanation;—for, the first is only met with after entire loss of exercising the will; the second is, perhaps, due to extension of the poisonous influence to the sympathetic system; and, the third is only a secondary phenomenon observed towards the end;—while all are of rare occurrence and in no way essential.

Exacerbations and remissions, or periods of increase and decline in the degree of the paralysis, have been seen, chiefly in experiments on animals, but alternations such as these, you know, are observed after many other toxics.

The next chief point of interest about Calabar Bean is its merit as A Remedy in Tetanus. It was first proposed for this object, suggested no doubt by its power of controlling muscular action, by Dr. T. R. Fraser, who in the year 1863, when he graduated at Edinburgh, received the gold medal for his inaugural dissertation on Calabar Bean. As a remedy in this disorder, it was first used by M. Lemain, in 1864; Mr. H. Coote, also, used it in the same year. Up to January, 1869, so far as I

can gather, there are thirteen cases upon record in which it was administered, and judging from the results, as stated, it is entitled to pre-eminence over all other substances that have yet been prescribed in Tetanus. Of these cases, nine recovered, four died. Of these last, (the death cases) one patient was in articulo mortis when treatment was commenced, and only one dose of Calabar Bean was given; in another, Tetanus had existed eight days before the remedy was had recourse to, and the person lived three days afterwards; in the third, the disease followed a severe injury of the knee, amputation was performed, and the person died four days subsequently, during which time the Bean was exhibited; and in the fourth, (Reported in *Lancet*, October 31st, 1868) Tetanus came on after dislocation of the finger and other injuries, six days after its commencement the remedy was begun, the patient lived thirteen days longer,—the remedy appears to have been given freely, as well as fully, and, it is said to have alleviated the severity of the paroxysms. Except this last, the remedy was probably not given in any of these cases effectively, so as to develop its physiological action. Let us now turn to the nine successful cases: Tetanus was due in the 1st to severe exertion; in the 2nd not stated; in the 3rd to slight injury of great toe; in the 4th to injury of the forefinger; in the 5th to wound of the left thumb; in the 6th to contused wound of the sole of the foot; in the 7th to wound of the scalp; in the 8th and 9th not stated. I am particular about these facts, as it is only by knowing the kind of Tetanus, whether traumatic or not, we can judge of the real value of the remedy. There are some forms of Tetanus where there can be no hope of benefit from Calabar Bean, as where either serious nerve lesions are the cause, or some irritation of peripheral sensory nerves constitutes a larger share than ordinary of the affection. In these it is likely enough to fail, because it does not control the afferent or sensory nerves, nor suspend their conductivity, as it does that of the motor nerves. As we have seen, it operates upon the centre and not upon the surface of the reflex nervous arc. Could it do this last, also, as well as the first, it would be a universal remedy in Tetanus, a cure for all cases. The fairest cases for its employment are those where, either, there is undue exaltation of the reflex activity of the spinal cord, or where there is the same condition of abnormal excitability in the motor nerves. There is no remedy in common use equal to Calabar Bean for subduing these morbid states; and in cases where it fortunately happens, the cause of the Tetanus has been spent in inducing them, or does not continue in further play after their establishment, the remedy, if given, is most favorably adapted for being entirely successful. To obtain its full benefits, it should be administered as early as possible,—a little at the onset may accomplish what much, after

a delay, may be unable to do? We have seen, where it was unsuccessful, it was not had recourse to until late, too late. It should be ordered so as to produce a decided impression, so as to bring the system under its paralysing action, and its operation must be maintained by cautious renewal. Of course, care must be had not to overdo the dosing, and not to substitute poisoning for Tetanus. The *juste milieu* is to give it so that its influence will never be entirely withdrawn, and yet never grow unnecessarily powerful. Do not repeat the doses too rapidly, else the strength of one will be added to that of the former; the effects of one should be declining before the next is administerd. Slight nausea, strength of pulse slightly contracted pupil, and decrease of rigidity indicate the safe action of the remedy. On the other hand, extreme nausea or vomiting, feebleness of pulse, excessively contracted pupil, and inability to move denote that it has been pushed too far. Each dose requires about twenty minutes before its effect is perceived; once this is begun, it continues for about half an hour, after which it subsides, and disappears rather quickly. In some cases, every two hours may be often enough to repeat the medicine; —but, in the most severe, not more than an hour should be let elapse between the doses, till improvement ensue. Directions about the subsequent doses are to be regulated by the impression made. Small quantities may be preferred, because they can be renewed more frequently. The doses of Calabar Bean in Tetanus are larger than in other disorders, just as larger doses of other active substances are tolerated in it than in them. An admirable plan of giving the remedy in Tetanus is the hypodermic, owing to the difficulty of opening the mouth and of swallowing. One third of a grain of the extract or Mvi of Fraser's Tincture may be injected at the commencement of the treatment. If gastric administration be preferred, one third more of either preparation may be used at first. Once an impression is induced, a less dose may suffice to maintain it. The extract, or tincture if selected, to be injected, ought to be diluted with 10 or 15 minims of water. Occasionally, irritation of the cellular tissue has been found to follow,—it is said to be prevented by combining a small quantity of Bicarb Soda. As soon as the relaxation induced renders swallowing easier, the remedy may be continued by mouth instead of hypodermic administration. If you use the remedy, use it fairly or not at all. To give the smallest wee dose three times a day in a formidable case of Tetanus, and call this treating Tetanus by Calabar Bean is a sham; and is as great an absurdity, as to shake the head despondingly should the patient die and then mutter "Ah! another death after Calabar bean," leaving one to infer that the *post hoc* is a *propter hoc*. The just conclusion warranted, I think, by the present state of our knowledge

of the treatment of traumatic tetanus is this: *the* PROBABILITY *is without Calabar Bean the patient will die, and with it he will live.*

The last point of interest about Calabar Bean, upon which I shall dwell at any length, is its ANTAGONISM TO STRYCHNIA. From the correspondence between tetanus from strychnia and tetanus from other causes, the utility of the remedy in the one naturally leads us to expect it would be serviceable in the other. The actions of the two agents on the same parts or functions are diametrically opposite. Strychnia causes undue excitation of the motor column of the spinal cord, or augments the polarity, as the fact has been differently expressed; Calabar Bean represses this excitation, reduces this polarity. Strychnia induces a tetanic state of the muscles; Calabar Bean a paralytic. Strychnia produces inordinate irritability of the sensory surfaces: Calabar Bean does not. It is, therefore, to be expected one could counteract the other. Dr. Fraser of Edinburgh and Dr. Watson of Glasgow have performed a large number of experiments to show they really do so. In rabbits, cats, dogs and frogs, where tetanus had first been developed by strychnia, the subsequent use of the bean prevented the recurrence of the rigid spasms, and, in their lieu, left the opposite state of relaxation; so that there is no doubt whatever it will, in sufficient quantity, control the tetanic action of strychnia. This it accomplishes, not as a chemical antidote, but, by its power to establish a vital change in the state of innervation. You may now, perhaps, be surprised to hear, that although it can achieve so much, yet still many of the animals, experimented upon, died. But the reason is sufficiently obvious: one poison followed another,—two poisons were at work in the system, so that if one failed to kill, the other might be fatal, since after annulling the action of the other, a surplus quantity large enough to destroy might be left; or even where there was no surplus, after the first had been nullified, the shock already communicated might be too exhaustive to allow of recovery. Again, from the duration of the capability of strychnia to act as a poison, being longer than the duration of Calabar Bean to subdue its effects, it has happened that after the latter agent has quelled the operation of the former for a time, and the animal seemed likely to recover, a return of the toxic symptoms of strychnia took place. I would like you to give these considerations their proper due, from their bearing upon the subject of the treatment of tetanus, as this will keep you from falling into the false idea that as are the results of Calabar Bean in strychnia tetanus, so will they be in traumatic tetanus. Of the two cases, most advantages are upon the side of the latter; the remedy is safer, there is not the need of such a large quantity, instead of being administered at one time it is

divided into occasional doses, and more time exists in which it can be tried from the longer duration of the case. In order to obtain a cure from the bean in poisoning by strychnia, not only should the dose of the latter be comparatively small, but, as in tetanus from injury, the remedy must be employed early, else the destructive influence upon innervation or nervous structure may be too far gone to overtake.

Calabar Bean has been used at Prague in poisoning by belladonna, and it is affirmed with benefit. Vomiting was induced, or promoted if present, and then the bean administered. I suppose the contrary action of the two agents upon the iris prompted this use. There are, however, no real antagonisms between them upon the same part of the nervous system, as between strychnia and Calabar Bean. Each affects a different organ, belladonna is a cerebrant and the bean a spinant. Little hope, therefore, can be entertained of any such benefit being had from Calabar Bean in poisoning by belladonna as in poisoning by strychnia.

I may mention that the bean was used in 1863, for the first time, by Dr. Harley in Chorea, and successfully. In this affection a moderate dose three times a day is sufficient, and there is no need of producing the physiological action of the drug as in the treatment of tetanus.

I may also mention, in conclusion, that Calabar Bean has been prescribed in epilepsy, and as a vascular or cardiac sedative in erysipelas, acute bronchitis, rheumatic fever and other disorders, in none of which, in my opinion, it has any superiority over the remedies usually exhibited, and is not even their equal.

And lastly, Calabar Bean might be found advantageous in some cases of acute myelitis, cerebro-spinal meningitis, spinal irritation, and hypercinetic states of the spinal cord, which suggest themselves to me as a more likely group for its good service than the last mentioned.*

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* I would refer those who wish to read more about this interesting agent to the communications of Dr. T. R. Fraser, *Edinburgh Medical Journal*, 1863; *Idem*, December, 1867; *Practitioner*, August, 1868; Dr. Harley and others, *Edinburgh Medical Journal*, 1863; Dr. E. Watson, *Idem*, May, 1867; Dr. J. B. Edwards and other, *Pharmaceutical Journal*, 1864-65; to whom I am much indebted for information afforded.—W. W.

Messrs. K. Campbell & Co., Medical Hall, have a stock of the beans, and will supply preparations that may be ordered.

*Excessive use of Morphia,* A DRAHM *of the Sulphate taken at one Dose with impunity.*—By D. McGILLIVRAY, M.D., Physician to the Ottawa Protestant Hospital.

In the month of June 1867. I was called to visit Mr.——M.D.B., staying at one of the hotels in this city, where he was confined to his room having symptoms of delirium tremens. He was thirty-seven years of age, stout, muscular and plethoric and of intemperate habits, had resided in New York city for the last six years where he practiced his profession as barrister at law. About the commencement of January 1865, he had an abscess in the thigh from which he suffered severe and continuous pain, and in order to allay his agonies and induce sleep he was, ordered by his physician to take a drahm of laudanum each night and a similar quantity during the day. He continued by that prescription for a period of three months until every symptom of his complaint had entirely disappeared; he then discontinued it but much to his discomfort becoming nervous, irritable and wakeful and subject occasionally to intolerable tremors. He was forced to resume his habit. He made repeated efforts to master his desires and stop the use of opium in any form, but without avail and finding it impossible to do without it, he was obliged to resume his accustomed draughts, gradually increasing the dose from time to time as nature seemed to suggest and require it, until he had fostered himself into the daily habit of taking astonishingly enormous quantities. In order to satiate and appease his abnormal appetite he found it necessary take half a drahm of sulphate of morphia daily, some days more and some days less.

He took as much as a drahm and a half in thirty hours and found no alarming effects to follow, he frequently took three ounces of laudanum at one gulp and repeated the same dose within twenty-four hours, with the only effect of causing snatches of sleep lasting from one to four hours. He had always had a good appetite for food and enjoyed comparatively good health. Abstainance from opiates was latterly followed by by troublesome diarrhœa associated with the other symptoms already named, when sleep occurred it was disturbed by frightful dreams. He was an inveterate smoker and a hard drinker almost incessantly revelling in debauchery and profligacy, the more whisky he drank the more morphia he required to take. Until about a year ago he used laudanum almost exclusively, but to avoid the inconvenience arising from carrying about him such large quantities as he required to use, he betook himself to the use of morphia of which he kept abundance on hand but he took laudanum occasionally.

One evening after he had recovered from his illness at about 7 o'clock, while I was present with him in his room in order to assure me of the capability of his system resisting the effects of opium, an experiment I was very reluctant to witness, he opened a parcel containing twelve small bottles each of which contained a drahm of sulphate of morphia, he took up one of these bottles and emptied its whole contents into a tumbler which he had half filled with whiskey, stirred the mixture well and swallowed the terrible dose at one gulp, (a quantity sufficient to destroy twenty or more lives,) and in the course of fifteen or twenty minutes after drank down at one draught four ounces of laudanum which he had procured in a drug store close by.

An hour after performing the dangerous experiment he went to spend the evening in the theatre where he enjoyed the drama with all due complacency. I visited him at his rooms in the hotel at eleven o'clock the same evening and saw him take nearly a fourth of a drahm of morphia in a glass of whiskey before retiring. Fearing that the experiment might have proved too much for him during the night I called to see him at an early hour the following morning and to my utter astonishment found him wide awake after having passed a quiet night and apparently suffering from no ill effects of the poison. He asked for more whiskey and morphia, I strongiy remonstrated and cautioned him against the results sooner or later to follow such enormous doses of poison and such flagrant abuse of his constitution—his only reply was, "I am used to it and there is no danger." Satisfied and easy in his own mind that there was no danger and that the seeming impunity he enjoyed in the past he would still enjoy in the future, he was willing and determined to pursue his dangerous habits. Two days after he went home to his family in New York, and was gone nearly four months at the end of that time he returned to this city with the intention of taking up his residence here with a view to practice his profession, when he arrived here he consulted me for urethral stricture which caused him intense pain and to allay it he was obliged to use opiates in larger quantities.

He was now feeble and exhausted, worn and emaciated, apparently fast sinking a victim to his evil habits of the dangers attending which he was now fully convinced. He had been addicted to this destructive vice of opium eating for nearly three years and it had gone on increasing from day to day until it had acquired its alarming and incredible magnitude. With the perfect consciousness at last that he was destroying himself and with every desire to struggle against the insatiable cravings of his diseased appetite he found it utterly impossible to offer the slightest opposition to them. In vain did he try to resist the baneful temptation.

His love for ardent spirits was so strong, his appetite for opium so uncontrollable that he must still indulge in the use of these insidious poisons which he knew were undermining his system slowly but surely, and as an inevitable consequence nature yielded to their pernicious influence; an attack of delirium tremens supervened and death closed his sad career.

Wellington Street, Ottawa, Dec. 1868.

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## REVIEWS AND NOTICES OF BOOKS.

*A Hand-Book of Vaccination.* By EDWARD C. SEATON, M.D., Medical Inspector to the Privy Council. Philadelphia; J. B. Lippincott & Co., 1868. Montreal; Dawson, Brothers.

The subject of vaccination is one which certainly should be full of interest to every practitioner, yet it seems to us that, compared with its very great importance, it receives but comparatively little attention. We are frequently asked by the public how it is, that in spite of the apparent vaccination of the majority of people, small-pox continues its ravages, every now and again striking terror into a community, by suddenly carrying off its victims from among the wealthy and the well-to-do. Were we to answer this question honestly according to our convictions, we would be forced to state that much of the vaccination is spurious, and therefore does not give that protection which is rightly supposed to belong to a thoroughly genuine and characteristic vesicle. At the present moment it is not our intention to enter into a discussion of this question; this we may do at an early date, but as the subject is one which is creating considerable excitement at the present moment in the city of Montreal, we could not avoid expressing briefly our opinion as introductory to a notice of the volume, the name of which heads this article. Although much progress has been made in investigating this subject within the last twenty-five years, no complete work has, till now, appeared since very early in the present century. The recent introduction of compulsory vaccination laws in the United Kingdom has been the means of concentrating upon this subject a good deal of attention from men well calculated to investigate, and Dr. Seaton's position as Medical Inspector of the Privy Council has enabled him to bring together in a handsome little volume of almost four hundred pages, the very latest information. At the very outset of the volume he starts with a truism which we can honestly endorse.

He says, "the operation of vaccination was not, it appeared to me, regarded in its real value. Seemingly so simple in itself, many of the niceties and cautions which so influence success, and the value of which is so well known to the practical vaccinator, have been unheard in general practice, and I deem it of great importance that attention should be called to them." The above lines deserve the most careful consideration. Carelessness in performing vaccination is often the cause of want of success. It is, we are aware, a common belief, especially among those who have imbibed the idea that the vaccine lymph of the present day is loosing its protective power, that by passing humanised lymph through the cow it would regain its original intensity of action. Dr. Seaton says :—

"When active lymph, such as passes from arm to arm with the greatest facility, is passed through the cow, and at once vaccinated back, it yet *retains* so much of its humanization that it is not apt to fail like primary cow-lymph, but will be found also to have *lost* so much of its humanization that on its return to the human subject it takes effect less kindly : papulation is usually retarded, and though the vaccination may attain maturity at the ordinary average period, the completion of the maturation is often postponed. The vesicles are often smaller and the disease not really so well developed as by the stock from which the lymph was derived. Two, three, four, or several removes are necessary to give it the same activity as it had before it was transferred.

Considerable stress is laid upon the selection of lymph to be used in vaccinating. He says :—

"This is a matter of the utmost consequence. The lymph must be taken only from perfectly healthy subjects, and from thoroughly characteristic vesicles. No second-rate vesicles should ever be used to take lymph from. Babies are in general much better lymph-givers than elder children or adults. Children of dark complexion, not too florid, with a thick, smooth, clear skin, are those which yield the finest and most effective lymph. Prime lymph is always perfectly limpid, and has besides (and no less essentially) a certain degree of *viscidity*. A thin serous lymph is always to be avoided. With regard to the period of the vesicle's course at which the lymph should be taken from it, this *may* be done, and with perfect propriety, as soon as ever the vesicle will yield any ; such lymph, though it can only be got in small quantity, is very effective. Usually, however, lymph is not taken, nor for the purposes of good vaccination is there any necessity whatever that it should be taken, until the vesicle is fully formed, which, in regular cases, is the day week from the vaccination. The vesicle then yields lymph of the best quality, and in sufficient abundance. It must be taken, however, according to Jenner's 'golden rule,' before

the appearance of the areola, or at all events within a very few hours of its commencement. No greater mistake can be made than that of taking it later, and when the areola is fully complete. The protest which Jenner felt it necessary to make against this practice in the earlier days of vaccination has been repeated by every vaccinator of authority since his time. No doubt the lymph flows more freely at this late period, and may be got in greater abundance, and no doubt also (as is alleged by those who defend this practice) such lymph very often takes; but, in the first place, it does not take *with anything like the same certainty* as earlier and more active lymph, and in the second place, it is more apt to be followed by erysipelatous and spurious results. I repeat, that judicious *choice* of lymph—the taking it only from suitable subjects, from the primest vesicles, at the proper time—is a cardinal point in good vaccination. And I will venture to say that just in proportion as the rules here laid down—rules sanctioned by all the best authorities—are adhered to, so will success be attained, and irregularities in the course of the vaccinations performed be avoided.

*Collection of the Lymph.*—A child and a vesicle fit for the purpose having been selected, the vaccinator, in order to collect the lymph, proceeds to open the vesicle by a number of minute punctures, which must be made on its surface, and not round the base. The object of many punctures is to open the various cells of the vesicle in which the lymph is contained, and the reason for making these on the surface and not round the base is to obtain the lymph free from any admixture of blood. If by accident any blood be drawn, this must be allowed to coagulate, and then be carefully removed before taking the lymph; for it is a rule never to be deviated from, that the vaccination must be with vaccine lymph, *and with lymph only*. When the cells of the vesicle are freely opened, the lymph soon exudes and lies on the surface; and thus lying, it may be taken on the point of a lancet, or in any other way that is desired, for use. On no account must there be any pressure or squeezing of the vesicle with the lancet, or otherwise, to make the lymph exude; and when lymph ceases to stand spontaneously on the surface of a vesicle, that vesicle must be considered no longer useable for lymph supply. Very generally, however, when the lymph which has first exuded has been taken, and the surface of the vesicle left apparently dry, if the operator wait a minute or two he will find there has been a fresh exudation of good usable lymph; and when he does not find, he may often induce this in a way quite unobjectionable by wiping very gently the surface of the vesicle with a soft wet linen cloth, thereby removing or dissolving the inspissated lymph which clogs the punctures."

Our author strongly recommends arm to arm vaccination as being the most successful. Investigation proves that when this is carefully done there is only about one failure in one hundred and fifty cases, while in the next best method, namely, vaccinating from liquid lymph, preserved in capillary tubes, the failures often amount to as many as one in ten. Five punctures are to be made, each about half an inch apart, and it is quite immaterial whether they are made by scarrification, tatooing, or puncture. The somewhat common belief that when a considerable quantity of blood oozes from the scarification it will destroy the infecting power of the lymph, is, Dr. Seaton says, only chimerical. As, in Canada, few practitioners employ anything but the scab in vaccination it may be useful to note that he strongly insists upon the absolute necessity for the utmost care being taken in the selection of scabs, none being used except what he terms the dark dense mahogany scab, and equally great care must be taken to preserve it. One that has been kept longer than eight months should never, upon any account, be employed, as it never yields a true Jennerian pustule, although it may give rise to an amount of inflammation well calculated to deceive, In dissolving the scab to make a ropy mucus he recommends the employment of cold water, and only a drop of it. His reason for so doing he does not mention, although from the fact of the word cold being in italics we fancy he lays considerable stress upon it. We have, when using the scab, although of late we have almost entirely used liquid lymph collected in tubes, always used warm water to dissolve the matter. Since reading Dr. Seaton's work we have used, as he recommends, cold water, and fancy that we have obtained rather more success.

"The *perfect* scab—the mahogany-colored semi-transparent scab of a vesicle which has not been damaged, either for taking lymph or in any other way—should alone be employed. It is used by moistening it with water on the back of a plate, and then working it up with a little water by means of a clean knife, so as to get a ropy solution, abundance of which should be inserted. It seems at first sight strange that this mode should succeed, when we know that the lymph taken at a late period from a vesicle is of very little value. Jenner illustrates and explains the difference thus: 'Several punctures were made in the arms of a healthy child with vaccine matter taken from the edges of a vesicle when three-quarters of the centre were incrusted. Not one of them took effect. Some weeks afterward, with a solution of the same scab, I vaccinated effectually. This, I think, may be accounted for—the scab is made up of the *early* as well as the late-formed matter.' Still, vaccination from the scab is a very uncertain mode of proceeding, and no one would think of employing it now in this country, where so much better means are at hand."

Our author insists upon the practitioner *seeing* the child a week from the performance of the vaccination, and not trusting to being *told* by the mother that it has taken well. Care must be taken to see that the pustule is specific—*this alone can make the child safe.* Care must be taken not to allow the clothing to rub over the pustule, thus breaking it and allowing a large quantity of lymyh to escape.

Dr. Seaton writes strongly upon the absolute necessity for special instruction in vaccination, which Jenner always insisted upon. It is a strange anamoly that examining bodies in this country (we believe the College of Surgeons of England now insist upon a certificate of special instruction in vaccination) do not insist upon some test as to the knowledge of the candidate upon the subject of vaccination. We fear it would puzzle not a few of them to describe the characteristics of a genuine vaccine vesicle. With such a state of things is it to be wondered that small-pox still continues its ravages ?

With regard to the deterioration of lymph Dr. Seaton says:—

" It has been held by many that vaccine lymph degenerates, deteriorates, or loses something of its active power, merely by passing through a succession of human bodies. This hypothesis dates from a very early period of the history of vaccination, and applications for lymph ' as recent from the cow as possible ' were made to Jenner within two or three years from the promulgation of his discovery. He thought it of no importance whatever to comply with the exact terms of such requests, for he was well satisfied from his experience at that time that no such deterioration had then taken place. Nor did he think it likely that with proper care it would occur at all; though this, he said, was a point which ' time alone can determine.' Further experience—a careful watching of vaccination for upwards of twenty years more, during which lymph, successively transferred from subject to subject, had undergone no change whatever in its qualities—fully satisfied him that the hypothesis was groundless.

But, in so deciding, he was most careful to draw the essential distinction between deterioration of lymph by mere successive transmissions (the subjects for transferring it having been proper ones), by mere lapse of time since it was taken from the cow, on the one hand, and deterioration by transmission through unselected subjects, through subjects not fit for transferring it, on the other. And while he regarded the former as an utterly erroneous notion, a conjecture which, as he said, ' he could destroy by facts,' he did not fail to point out the danger of deterioration from want of proper care in the choice of subjects. ' The matter,' said he, writing in 1816, ' may undergo a change that may render it unfit for further use by passing even from one individual to another, and this was

as likely to happen in the first year of vaccination as in the twentieth;' but that, with proper care and attention, lymph underwent no change, was proved, he held, by the fact that the vesicles he was then producing were 'in every respect as perfect and correct in size, shape, color, state of the lymph, the period of the appearance and disappearance of the areola, its tint, and finally the compact texture of the scab, as they were in the first year of vaccination; and to the best of my knowledge, the matter from which they are derived was that taken from a cow about sixteen years ago.

Now, if lymph could thus undergo from eight to nine hundred transmissions without giving any evidence of change, it seems difficult to understand why, in equally careful hands, and with similar opportunities of choice, it should not remain equally unchanged after an indefinite number of transmissions. Accordingly, numerous trustworthy observers, who had watched the vaccine disease at the introduction of vaccination, on comparing what they had seen with the effects produced by lymph of the earliest stocks after a lapse of thirty or forty years, were unable to detect the slightest difference either in the course or character of the vesicles. Exactly the same is the case if we compare Jenner's description of the course of the vesicle with that induced at the present day with lymph of Jenner's stock. Marson says he has frequently produced lately, with lymph brought into use by Jenner more than fifty years since, vaccine vesicles, which, on comparison, exactly correspond with the vesicles sketched in Jenner's original work. Mr. Steele, the able and experienced teacher of vaccination at Liverpool, states that the lymph he is now using was supplied by Jenner himself, and is producing still precisely the results it developed at first. After it had been more than fifty years in use there, it was compared, side by side, with lymph which Ceely had taken from a cow six years before, and which he guaranteed to have lost none of its activity; but no difference between the effects of the two lymphs was detectable. The lymph now in use throughout the stations of the National Vaccine Establishment is, if not exclusively, nearly all of Jenner's original stock, and, from daily opportunities of observation, I can affirm that it has not lost anything of its infective power, and that the vesicles produced by it correspond accurately in their character and course with Jenner's description.

I concur entirely, from personal observation, with the statement which the National Vaccine Board made in 1854, 'that the vaccine lymph does not lose any of its prophylatic power by a continued transit through successive subjects, and that it is a fallacy to predicate the necessity of resorting to the original source of the cow for a renewal supply."

Upon the very important subject of Re-vaccination we copy the following:—

"Many of the cases of post-vaccinal small-pox which are met with in practice are in persons whose vaccination has been irregular or imperfect. When, also, after a lapse of years, it became evident that some individuals, whose vaccination had been normal in its course, might yet afterward be susceptible of small-pox infection, and that these cases occurred chiefly to persons who were grown up, the idea of renewing the vaccine process, once or oftener, in the life-time of each individual, naturally suggested itself. When, further, the necessity of a certain *amount* of local infection in vaccinating was recognized, re-vaccination was looked to for supplying this amount in cases in which, in the original vaccination, it had been deficient. Hence the present practice of re-vaccination aims at much more than Jenner thought of: it aims not only (1) at repairing whatever was irregular in the course of a primary vaccination, but also (2) at supplying what was imperfect in the *amount* of infection in cases in which the *course* of the disease was regular, and further (3) at extinguishing the susceptibility to small-pox which may remain, or may rearise, in an indeterminate number of persons whose primary vaccination may have been complete as well as regular."

It is a belief generally gaining ground among the vulgar that every seven years the body undergoes a kind of metamorphosis, and that regularly every seven years re-vaccination should be performed. Experience, however does not so teach us, and while we are open to all reasonable suggestions, come from where it may, we must not allow ourselves to outrun our discretion. Dr. Seaton says:

"Revaccination about or after puberty is of extreme importance; it seems also certain that a revaccination at or after this period of life may give additional security * * * After successful revaccination, small-pox, even of the most slight or modified kind, is rarely met with. Thus Heim found that in five years there occurred among 14,384 revaccinated soldiers in Wirtemberg, only one instance of varioloid, and among 30,000 revaccinated persons in civil practice, only two cases of varioloid. * *

Every person should take care to be revaccinated about or soon after puberty. Under ordinary circumstances, about fifteen years of age is the best time for it to be done; and it should not be left much beyond this, for the age of most danger from post-vaccinal small-pox is from fifteen to twenty-five. On the other hand, where there is any unusual risk of small-pox, as in localities in which the disease is prevailing, it would be imprudent to wait so long, and the revaccination may be done at any period after twelve years of age, or, in individual cases, even earlier than this. In girls, especially, in whom the changes connected with puberty manifest themselves early, revaccination may be performed cor-

respondingly early. The degree, however, in which vaccinated persons, when they are grown up, stand in need of revaccination, is, I repeat, very different. Those who have imperfect marks need it much more than those whose marks are characteristic; those who have but one or two good marks much more than those with three or four. Small, indeed, as the risk of contracting the variolous infection in any form is to those who have been thoroughly vaccinated, who have four good marks of their vaccination, and infinitely small as is to them the risk of having it severely, it is a risk not worth the running, and as no individual can tell whether he is one of the wholly protected majority, or one of the but partially protected minority, it is the part of wisdom, even for the best vaccinated to seek the additional security of a revaccination."

Dr. Seaton strongly recommends a systematic revaccination, and not waiting till an epidemic warns of the danger. In other words revaccination should be as systematically performed at the age of puberty as is primary vaccination within a few months of a child's birth.

We have thus given our readers, we believe, a fair insight into this valuable little book of Dr. Seaton's, and it will not be our fault if every subscriber to this Journal does not obtain a copy. We strongly advise them to do so, for, after its careful perusal, we feel convinced they will get up thoroughly convinced that heretofore, at all events in Canada, the profession have *not* paid that attention to vaccination which it deserves, and that much of the prevalence of small-pox has been due to the large amount of spurious vaccination which we cannot help again reiterating is constantly taking place.

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## PERISCOPIC DEPARTMENT.

### Surgery.

#### A NEW METHOD OF ARRESTING HÆMORRHAGE.

On the 21st of November, 1868, Dr. Frank H. Hamilton removed a schirrous breast when he adopted the following method for controlling hæmorrhage during the operation. We copy from a report of the case in the *New York Medical Gazette* of the 5th of December, 1868.

Dr. Hamilton says, in order to restrain the bleeding until the vessels could be secured by ligatures, I adopted the following procedure which I have never used before nor seen suggested by others: After the patient was fully under the influence of ether, I encircled the chest with two long strips of adhesive plaster, each of which was about two

inches in width and long enough to surround the chest completely and allow the ends to overlap each other. They were drawn tight, but not so tight as to interfere with respiration. One of them passed under the breast at a point about one inch from the line I had indicated to myself as the probable line of incision; the other passed above the breast, between it and the axilla, at about the same distance from the projected upper line of incision; the two strips of plaster forming an ellipse completely enclosing the breast. Within this ellipse the incisions were made, and it was apparent that by the pressure of the plasters the bleeding from all the tegumentary and superficial muscular vessels was completely, or almost completely controlled; so that the amount of blood lost in the operation was comparatively trifling.

On closing the wound I did not remove these strips. This was an error which on another occasion I should avoid, since they prevented the complete and accurate coaptation of the tegumentary flaps and allowed the margins of the wound to become everted.

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## Medicine.

### ABSTRACT OF A LECTURE ON THE THERAPEUTICS OF WAKEFULNESS:

Delivered at Bellevue Hospital Med. College, by WILLIAM A. HAMMOND, M.D.

Brushing the hair, or friction of the skin, as by rubbing the palms of the hands or the backs of the arms, will in some persons tend to induce sleep. Soothing sounds have sometimes a similar effect. On the other hand, persons whose occupations are noisy are apt to awake when the noise to which they are accustomed suddenly ceases. A miller has been known to wake up when the noise of the machinery stopped, and a man, who had for many years lived within sound of the roaring of Niagara Falls, was unable to sleep at first on removing from the locality.

But agents more efficacious than such external ones, are those which lessen the amount of blood circulating in the brain. First may be mentioned food and drink, of whose happy influence a frequent illustration is given in the case of a late supper. During digestion more blood circulates through the gastro-intestinal vessels than when the abdominal organs are unemployed; and this additional amount of blood must come from some other part of the body, since a marked excess of this fluid cannot exist in two different parts at the same time, except in cases of disease. That the amount of blood in the brain is diminished during digestion is evinced by the feeling of drowsiness commonly experienced,

which is a perfectly healthy sensation. The food, thus taken as a therapeutic agent, should be easily digestible. The sensible physician will hardly resort to drugs, if such pleasant medicine as a good supper can be given with equally good effect.

In persons weak or anæmic, especially women who have been rendered so by hæmorrhages, a dose of some one of the various preparations of alcohol at bedtime is frequently advisable. Of these, wines are not generally so admissible as the stronger preparations, such as spirits; in this country whiskey will be most easily attainable. A Methodist clergyman, who came under my care, had been unable for seven or eight weeks to sleep more than two hours each night. I prescribed a dose of whiskey to be taken at bedtime. He at first strongly protested against taking it, upon grounds of principle and his previous habits of total abstinence, but finally agreed to try the remedy. The first night he slept five or six hours; the second, seven or eight hours: his whiskey was then reduced in amount gradually, from half a glassful to none at all. He continued to sleep well, and has not formed any habit of drinking.

In healthy persons, coffee is calculated to produce wakefulness; in others it acts as a hypnotic, much as other stimulants do in asthenic cases. For the latter purpose, do not trifle with it by administering a little of a weak infusion, but give strong doses at once. Much depends upon the method of making it. Exhaust the strength of three or four ounces of ground coffee by percolation, with a rather small amount of boiling water; and give without milk or cream. Tea is not to be compared with coffee as a therapeutic agent, in this connection. It acts in a similar manner, but not so efficiently.

Sometimes sleep may be produced by physical exercise taken regularly about two hours before bedtime. This acts best in sthenic cases. It has been often noticed that change of air and carriage exercise produce sleep. The modus operandi of this I cannot explain, more than the familar fact that the rocking of a cradle puts an infant to sleep.

Some time ago, in England, there was constructed a table, known as Darwin's table, for the purpose of producing sleep in the insane. It was circular, and rotated upon a screw at the centre. On this the patient was placed, with his head at the centre, and the table was turned, thus producing sleep according to correct physiolological principles, although those principles were not then known.

The warm bath may be used as a hypnotic. In employing it, the head should be prevented from becoming heated, as by putting cold water upon it while the body is immersed; the application of cold water is, however, rarely necessary in the case of infants. The temperature of the bath is best regulated by the hand. Sometimes cold water alone applied

to the head proves sufficient, without the warm bath. I remember having read somewhere in Grave's writings that the Indian women sometimes put their babies to sleep by giving their heads a cold douche, this was also applied in the British army at one time as a punishment, and, it was found, with the almost invariable effect of producing sleep.

Another remedy, of much value, is the application of a sinapism to the epigastrium. How it acts I do not know; it cannot well do so through the circulatory system, but may by impression upon the nervous system.

The position of the body is important. In many cases, holding the head down produces wakefulness, such persons should go to sleep in the erect position.

Certain drugs form another class of agents for the production of sleep. That which has been longest in use is opium. As regards its power of bringing on sleep, the dose of opium varies in different patients. In small doses of half a grain to three-fourths, as an average, it acts as a stimulant; in moderate doses of one or two grains, it is hypnotic; and in larger ones it produces stupor, and not true sleep. Narceine, one of its constituents, has been found to produce profound and continuous sleep, but the ordinary preparations of it are too uncertain to be relied upon, and it is too expensive for frequent use.

Hyoscyamus sometimes acts excellently; it has the advantage over opium of not producing headache and constipation the following day. The tincture, especially Neergaard's, may be given in doses of a drachm to a drachm and a half three times a day, if necessary.

Oxide of zinc may prove serviceable in some cases. It came into use in the treatment of the nervous condition preceding delirium tremens. It has also been of value in hysteria when everything else has failed. Its dose is, as a maximum, two grains three times a day; as much as four grains may be given at the same intervals, but this quantity will generally produce irritability of the stomach.

Phosphorus is a remedy which has come into use more recently, in the class of cases of which we are speaking. It is supposed to act by supplying a deficiency in the elements of nervous tissue, increasing the amount of protagon. Owing to its chemical properties, it is not easily administered. Is can be given in the form of phosphorated olive oil, in the proportion of four grains to the ounce. It is preferable, however, to boil twelve grains of phosphorus in one ounce of almond oil, and filter. The oil absorbs four grains of phosphorus, so that each minim contains 1-120 of a grain. Half an ounce of the oil is now mixed with an ounce of gum arabic, and fifteen drops of some aromatic oil are added. Of this mixture the dose is fifteen drops, equal to five drops of the phosphorated oil, and containiag 1-24 of a grain of phosphorus. I have used this remedy in

eight cases with success, and failed in two cases. I try to get three doses taken before bed-time, and thus far have succeeded in producing the desired effect on the second day, if I had not on the first. The dose may be increased a drop a day till twenty drops are taken, or signs of gastric irritation supervene. I would not advise giving it in larger doses. In one of my cases, nausea was produced on reaching twenty drops, but sleep ensued also.

But of all the sleep-producing agents at our disposal, the bromide of potassium is most deserving of the name of hypnotic. I have never seen it fail when given in sufficient quantity. A healthy adult may take from twenty to thirty grains three times a day; the latter dose is not too large when it is needed at all. Sometimes it produces, among its other effects, great weakness in the legs, and a staggering gait, strongly resembling that of a person intoxicated with alcohol. In fact, I know of a gentleman who, while under the influence of this drug, was twice arrested in in our streets for drunkenness. Bromide of potassium occasionally produces also great lowness of spirits and a disposition to cry. It should be administered very much diluted. It may be conveniently prescribed one ounce to four ounces of water; a drachm dose of this is to be given in at least half a tumblerful of water.

A remedy which I have used recently, especially in cases of nervous excitement where a sedative seemed indicated, is sumbul. This is a plant of the same family as valerian. I have used it in conjunction with bromide of potassium in epilepsy, with the result, as I think, of increasing the effect of the latter. The dose of the fluid extract (Neergaard's) is from twenty drops to a drachm three times a day.—*Medical Record.*

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## ICE TO THE SPINE IN DELIRIUM TREMENS.

A case of delirium tremens successfully treated by the spinal ice bag is reported in the *Dublin Medical Press and Circular.* The ice was applied from the fourth cervical down to the first lumbar vertebra. In a short time the following phenomena were observed: 1. The induction of sleep. 2. The diminution, and finally the disappearance of the tremors. 3. The regulation of the heart's action. 4. The cessation of sweating. The production of a rise in the temperature all over the body, with a return of the natural color to the face. The patient fell asleep soon after the application, and slept the greater part of three days, during which time the ice bag was applied three times daily. He always found it to strengthen him, and said it made him feel as fresh as ever. It was discontinued for the reason that it caused so much depression of the circulation. Recovery was rapid and complete, without the use of stimulants.—*Pacific Med. and Surg. Jour.*

# Canada Medical Journal.

MONTREAL, FEBRUARY, 1869.

## THE ONTARIO MEDICAL BILL.

If we considered what is due to ourselves as a profession, we would pass over with silent contempt the puerile exhibition, styled a debate, in the Ontario Legislature, on the occasion of the introduction of the Medical Bill before the committee of the whole house. It was from beginning to end, on the part of all the speakers, save one—Mr. Pardee,—a tirade against our profession, and a laudation of humbug and quackery. Even the introducer of the Bill, who we believe is a graduate of McGill Univerity, endorsed every word that was uttered, and stated that he looked upon this Bill as the "*greatest boon offered to Ontario for a long time.*" Whether this sentiment will be acceptable to the profession of Ontario, remains a question. We cannot in reality see what is best to recommend to our brethren in Canada West, but were a similar calamity to happen to us in Lower Canada, where French Domination is so often cast in our teeth as a thing to be regretted, the profession would rise up as one man and force our rights on our Legislators. It is greatly to be regretted that our Ontario friends have not a little sprinkling of our *French*, who are at least gentlemen,—gentlemen too, who are not easily led by doctrine which is false and without foundation. Of our French Canadian Legislators we can truly say, if they are speakers, they are orators; if they are writers, they write grammatically; and if they attempt argument, they do so logically; they are not easily carried away by divers doctrines, having a due respect for scientific facts, the result of scientific investigation. Is the science of medicine so difficult a subject to grasp, that men without knowledge of its stand-points, will have the assumption to speak in the Legislative halls of the country, without presuming to know aught of the bearings of the subject, and utter rodomontade openly and without a blush? Since the Ontario Legislature have made a beginning, they had better follow up the roll. We would suggest their legislating on things spiritual as well as temporal, and as they have done for one of the learned professions they would do

well to insist, that all divines, who desire to preach the Gospel or any other doctrine, in that favoured land, Ontario, shall pass an examination before a central board, to be composed of examiners to represent the various religious elements to be met with; and that inasmuch as the doctrines will be necessarily numerous, the candidate shall not be required to state his conviction of the existence of a God, or even a belief in his own entity. A Bill with the above objects would be a fitting supplement to No. 30, of the 2nd Session, 1st Parliament of Ontario, and we should say that Mr. McGill (we are not surprised that he has dropt the Doctor) would be a very proper person to introduce it to the House, so that Jew and Gentile, of whatever hue—Ritualist and Atheist, might if possible accord.

But to return to the bill. Members of the medical profession have had forced into their ranks, by legislative enactment, persons who have hitherto been regarded as irregular practitioners. It was not sufficient that these men should hold a legal status. This *boon* was granted them mainly through the exertions of the wise men of the West some twenty years ago. The men of our days have gone a step farther. Thompsonians and bone-setters, and every shade of visionary, have been associated, by Legislative enactment, with the legitimate profession at a common board. They have all been placed in a sack together and shaken well up, to make a mixture, with a request from their learned legislators that all future bickerings and heart-burnings should end, and that the blessedness of harmony and peace shall be found to exist in their ranks, to the manifest elevation of that noble and god-like profession, whose votaries they are. We quit the subject with disgust, but with a sincere hope that the profession will be true to itself, and by steady and perservering industry adopt means to relieve itself from the awkward position in which it is at present placed.

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## AN EYE AND EAR HOSPITAL.

We perceive that Mr. Chapleau, M. P. P. for Terrebonne, has presented a petition to the Quebec Legislature for aid to the Eye and Ear Hospital, Montreal. The existence of such an institution is in the fertile imagination of the petitioners, and we doubt much the benefit to be derived by the sick poor of our city, if the aid asked be awarded. We have heard that the promotor of the petition is a member of the profession, whose sole claim to public confidence is a flaming advertisement, surmounted by a mammoth eye and ear which has graced the columns of our daily press for some years past. With regard to his ability as a

surgeon we know nothing, but the means adopted of attracting the public *eye* or of tingling the public *ear* is what is not customary with surgeons of respectability. We would merely state that the hospitals in this city, both of which receive Legislative aid, are in the habit of receiving for treatment a large number of diseases of this class, and if the members of the Quebec Legislature, whose aid is asked by the petitioners, will take the trouble of referring to the published annual reports of the Montreal General Hospital, they will there observe that a large number of diseases of the eye and ear are treated, both as interns and as out-door patients. We believe the same may be said of the Hotel Dieu Hospital. On public ground, therefore, we oppose this grant as an unnecessary outlay of public money.

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## CASE OF MALPRACTICE AT ST. JOHN, N.B.

### *Key vs. Thomson.*

It has been truly said by an eloquent writer, "Go into the abodes of the sick, and the poor and deserted, wherever there is disease or distress, there will you find some medical practitioner exercising his glorious art, patiently, freely, and fearlessly, for those whom poverty or vice, or the breath of pestilence has deprived of every other friend. Or, again follow him among the higher classes of patients, and you will find him there the friend and honest adviser of those who can seldom hear truth from any other lips;" yet such "medical practitioner" is often the victim of vexatious and vindictive law proceedings.

Should his best efforts fail, and his case terminate unfavourably, and should he unfortunately fall into the hands of those prompted by greed or malice;—a neighbouring medical man is consulted,—an *unguarded* opinion adverse to the treatment is given,—the case is placed in charge of an attorney, who, seeing a "bill of costs" looming in the distance, enters into the speculation,—for speculation it often is,—by which the medical practitioner, innocent or guilty, is to be mulcted in costs. It is true, that in the majority of such trials, the verdict is in favour of the medical man, yet success does not exonerate him from expense.

The following case is an illustration,—it has been *twice* tried in St. Andrews, the first time, extraordinary damages ($25,000) were given against Dr. Thomson,—upon an appeal to the Supreme Court, the verdict was "set aside;" it was again tried in August last, before Judge Weldon and a special jury:—this trial occupied nearly *a month*, and the jury disagreed. There the matter stands,—the unfortunate Doctor is saddled with the expenses of his defence, and will probably be obliged to run the gauntlet of another trial.

The plaintiff, John B. Key, was agent for a mining company, in the receipt of about $1500 a year, and having lost his fingers and toes, he is unable to retain his situation. The defendant, Dr. Thomson, is a man of ability and education, having been for 40 years a leading practitioner in St. George; and for many years a member of the Provincial Parliament; and is independent in circumstances. Hence the sympathy in favour of the afflicted man, who, charging the Doctor with *negligence* and *malpractice*, endeavours to prove that the parts were lost, not from the effects of *frost-bite*, but from inflammation and mortification produced by improper applications.

The plaintiff in his evidence stated, that he left St. George in a sleigh, by himself, at five o'clock on the afternoon of Saturday, the 23rd of December, 1865, to go to his residence about ten miles distant. That he had been drinking, could not say how much, but was sober. That the night was very cold, and he faced a north-west wind. Other witnesses proved that the thermometer registered below zero. After driving half an hour, he got out of the sleigh to "obey a call of nature,"—found his feet numb,—fell,—and the horse left him,—tried to follow the horse, but fell repeatedly, then lost his cap and mittens,—was alarmed and perspired from exercise. Had no pain or feeling in his hands or feet after he fell out of the sleigh, supposed he was frozen then. That he wandered about *four or five hours* before he came to a house, knew that he was frozen when he got in,—hands were hard and without feeling. Hands were immediately put in cold water, and kept there *half-an-hour*, scales of ice appeared on the hands when in the water, when they were taken out, *blood flowed from under his nails*,—his feet were *then examined* and found to be frozen, and when *they* were taken out of the water, *blood flowed from the ends of the toes. Warm flannels were then placed round the hands and feet.* That the defendant visited him the next day at twelve o'clock, about twelve hours after the frost was removed, *at which time* the hands and feet were "*dark red*," and *covered with blisters containing blood and water*. That the Doctor ordered the fluid to be let out, and a poultice of *flour, meal, hops, yeast* and *charcoal* to be applied, said that it would be a six weeks' job, and that not a joint would be lost, and directed that word should be sent to him on Wednesday, the 27th. That on Sunday afternoon after the Doctor left, *the nail* of *one of his toes fell off*, and in a few days several others came off with the skin. Poultices continued, flesh hot, swollen, red, and tender,—blisters refilled, could move fingers and toes perfectly. Sent for the Doctor on Wednesday, he did not come; pain increased, poultices continued; sent again on Friday, he did not come, but ordered turpentine to part, and chalk and

lime-water in poultice, which, when applied caused such pain, could not bear it; then applied a carrot poultice. On Saturday, the 6th of January, the Doctor came, left some medicine, applied a white powder to parts which caused pain, and ordered charcoal poultice to be continued. He did not came again till the 19th of January, when he brought his nephew Dr. R. Thomson with him, the hands and feet were rotten at this time,—they took off the fingers and toes at the joints with a pocket knife. The bones protruded, and the poultices were continued. Defendant promised to return in a week; he did not do so. And on the 28th of January, plaintiff sent for Drs. Gove and Babb, who "amputated his hands and feet." That he thinks he lost his hands and feet from inflammation, produced by *absorption* of *oxygen* of *blood* by *charcoal in poultice ! ! !*

The defendant in his evidence corroborated the statements of the plaintiff respecting the appearance of the parts when he saw them on Sunday, the day after they were frozen; but *positively denied that he said no joints would be lost.* That he believed at the time, that mortification must follow, and treated him accordingly, ordered a poultice to be applied composed of *half a teacupful of charcoal to two pints of meal, with some hops and yeast*, and directed him to report on Wednesday. Did not promise to see him again, said he would do so if he could, but he might not be able to do so: received frequent reports, and gave directions *in writing.* Visited him on the 6th of January, found his health good, mortification established, and ordered a wash composed of equal parts of sweet oil and lime water, with a little turpentine, to be applied daily; never thought of ordering turpentine *in* a poultice; directed charcoal poultice to be continued. In a day or two sent a powder composed of morphine, chalk, and quinine to be applied to the granulations. Saw him again on the 18th of January, found parts dead and falling off: had forgotten his instruments, and divided the ligments and tendons with a pocket knife. Did not take off ends of bones, believing that granulations would extend, and thereby enable him to save greater length of limb.

Dr. Gove was examined on behalf of the plaintiff, and deposed that he thought the freezing severe, but could not increase during exercise. That frost was properly removed, and *hot applications at that time not objectionable.* That vesication, falling off of the nails, pain, redness, and swelling indicated such vitality that parts might have been saved. Should call the poultice described, a mild stimulating one, one which would increase inflammation. *Charcoal would increase the heat and inflammation, and cause the death of the part.* Such a poultice con

tinued twenty-five days, highly injurious, would *harden and prolong inflammation, the very thing he would do to produce death of parts* Could not account for the death of the parts in any other way. Surgeon should attend often, and let out matter, which, by remaining would imperil joints and be absorbed. That the line of demarcation might appear from the 6th to the 10th of January, after this, thinks that absorption was taking place. That the *operation by defendant on the 18th of January was improper, "no medical man would do it ;"* thinks limbs were ready for amputation on the 18th of January. On the 28th of January was called to visit plaintiff and to perform an amputation, with Dr. Babb ; found bones protruding, "shoved back flesh," and took off bones a little above granulated surface with the forceps ; could not cover ends of bones.

On cross-examination said, if hands were black next morning, should consider it a desperate case.

Dr. Black on behalf of the plaintiff deposed that freezing was severe and deep seated ; frost was properly removed ; *right to apply warm flannels.* That motion of parts, coming off of nails with skin, pain, redness, swelling, and vesication, indicated such vitality, that parts should have been saved. Daily attendance necessary if possible. *No harm in charcoal,* should be used dry as an absorbent, being a *mechanical irritant* might cause inflammation. Turpentine should not be used in a poultice. *Thinks plaintiff 's limbs should have been saved.*

On cross-examination said, that continued freezing for six hours, chances of recovery much reduced. Hot flannels applied, and a warm room injurious immediately after frost has been removed.

Dr. Adams, surgeon H. M. 22nd Regiment, and Drs. W. Bayard, Keator, and Earle, of St. John, were examined at the last trial ; and Drs. Parker and R. Thomson, jr., at both trials, on behalf of the defendant.

They substantially deposed as follows :—That taking into consideration the length of time four to six hours, that the plaintiff was exposed to cold, *after* parts are acknowledged to have been frozen ; the frost-bite must have been *severe, deep,* and *dangerous ;* as they believe that the longer a frozen part is exposed to the atmosphere in which it was frozen, within certain limits, the greater the amount of congelation and consequent disorganization. The spray of æther or rhigolene thrown with force upon the surface, will produce superficial freezing in a few seconds, but continue the application too long, and mortification will follow.

That the manner in which the frost is taken from the part is of *vital consequence.* It should be removed gradually by the application of snow

or iced-water, continually applied until the part is *entirely* free from frost, and cool applications should be continued for a length of time in a cool room, to moderate that reaction which must follow. All warm applications, whether moist, or dry, should be scrupulously refrained from, as their use would almost certainly be followed by mortification. In consequence of ignorance of the above precepts, the mischief in cases of frost-bite is generally done before the surgeon is called. In the plaintiff's case, the *application of warm flannels at the time mentioned,, was highly improper.*

That they think a part cannot be so immediately *killed* by the cold that *reaction will not take place.*

That general exercise will frequently prevent the extension of frost-bite, but it cannot thaw a part already frozen.

That the flow of blood from the parts immediately after the removal of the frost, the swelling, pain, and "dark red" colour of them; the early vesication, and vesicles containing *blood and serum;* and the falling off of the nails, are symptoms rendering the probability of *saving the parts more than doubtful.*

That for incipient mortification consequent upon cold, some recommend the application of the compound tincture of iodine, blistering, &c., others emollient poultices with yeast; and when mortification is established, charcoal, the chlorides, &c.

That the treatment pursued by the defendant was not at all calculated to produce inflammation or mortification, the poultice was unobjectionable, so was the wash and the powder. It would not be proper to mix turpentine in the poultice. Charcoal is not a stimulant, it could not produce heat, inflammation and death of the parts. The continued use of the poultice described, was, under existing circumstances, quite justifiable; and could not produce mortification.

That when mortification exists, and the portion of the limb involved is large, the length of the part to be removed of little consequence, the line of demarcation formed, the strength of the patient in a fit state to bear the shock, then amputation of the part is necessary. But, when the parts involved are small, as the fingers and toes, *the elimination of them should unquestionably be left to nature,* for by so doing, length of limb is saved, which is of the utmost value to the individual.

That the operation, if it can be called one, performed by the defendant on the 18th of January, was not an improper one; dividing the ligaments and tendans, should produce little pain or loss of blood. The one performed by Drs. Gove and Babb, on the 28th of January, was not, in e surgical sense of the term, an amputation, and should not have

been called one; it consisted in removing the protruding ends of the bones, with the "bone forceps;" by which neither loss of blood, nor much pain should be produced, consequently it may be said that nature eliminated the parts, and that the plaintiff was not subjected to the shock of a surgical operation.

That the plaintiff lost his limbs in consequence of the severity of the frost-bite, and *not from negligence or mal-treatment* on the part of the defendant.

Here concludes the evidence, which, it may be stated, has been carefully taken from the Judges' notes.

Many other witnesses were examined, who, corroberated the testimony already given respecting the appearance of the parts, the mode by which the frost was removed, the nature of the poultices used, &c. But it is chiefly upon the medical testimony, that a case of this kind must be decided, and for the character of our profession it is to be regretted, that medical men in the witness-box are so often found to differ upon points, where difference of opinion should not exist, and that when a medical man finds himself a defendant in a court of law, his accuser is a professional brother. We do not deny that a medical man should be held responsible for malpractice, or that it is not sometimes the *duty* of one medical man, to express in court disapproval of the treatment followed by another; but to justify it, the maltreatment should be clear, and he should be morally certain that *his* opinions are correct.

In this case we find medical men arrayed on either side, differing widely in opinion. Those for the plaintiff asserting that the limbs were lost, not in consequence of the frost-bite, but from inflammation and mortification produced by the treatment. While those for the defendant say that the inflammation and mortification were caused by the severity of the frost-bite, and not from maltreatment.

Here is an unjustifiable difference of opinion, for any tyro in his profession should know, that the generally received opinion respecting frost-bite is, that where a part has been *long* exposed to extreme cold, and that immediately after the removal of the frost, blood flows from it, and, if within fifteen hours, the part turns "dark red," vesicles appear containing blood, and the nails fall off, the surgeon should expect such an amount of inflammation to follow, as would in all probability result in mortification. Yet, Drs. Gove and Black urged that because vitality existed,—ergo,—the parts should have been saved; forgetting that they could not have been so immediately *killed* by the frost, that no reaction or inflammation could follow.

Dr. Gove supports his opinion that "the parts were lost in consequence of maltreatment," by the assertions that the poultices composed of meal, hops, yeast, and charcoal, were improper, that the charcoal would increase heat and inflammation, and cause the death of the part; and that the application of such a poultice continued for twenty-five days, was "highly injurious;" the very thing he would do to produce the death of the parts. He does not stop here, but gives an opinion respecting a surgical operation at which he was not present, characterizing it as "an improper one," and "one that no medical man would do:" though it may be asked, what is the difference between the one performed by himself, and that by the defendant: the one divided ligaments and tendons, the other nipped off the protruding ends of the bones.

It would be a work of supererogation did we in a medical journal combat such ideas. We simply advise the Doctor, should he ever again appear in the witness-box, to study his subject, and exercise more caution; for he must recollect, that, however erroneous his opinions, they may, and probably in this case have had weight, with jurors incapable of reasoning upon medical subjects.

The premises upon which Dr. Black based his opinions are equally erroneous, though he is not quite so hard upon charcoal as his coadjutor.

When medical men in the witness-box differ in opinion, jurors as a rule are unable to say who is right. It may be said that the standing of the practitioner, should add such weight to his opinions, as to guide the jury true,—but the juror is the judge.

The result of this case, and that of several others recently tried in England, suggests the expediency of referring cases of malpractice to a jury or board of medical men. Of course this could not be made compulsory without Legislative enactment, though it might be practically carried into effect in this way. Let a board be established composed of medical men of the best standing, to whom a practitioner could refer, when threatened with a prosecution, it would be to his interest to represent the facts impartially, if an opinion adverse to his treatment be given, let him compromise the matter, if one in his favour, it would probably prevent his being dragged into Court.

We throw this out as a suggestion for consideration, at the next meeting of the Canadian Medical Association.

St. John, N. B., December, 30, 1868.

## CANADIAN INSTITUTE.

### Medical Section—Election of officers—Interesting paper from Dr. Agnew.

The regular meeting of this society took place on Saturday evening last. Dr. Thorburn in the chair. The attendance of medical men was large. After preliminary business the following gentlemen were elected office bearers for the ensuing year:—E. M. Hodder, M.D., F. R. C. S. E., chairman; J. N. Agnew M.D., secretary, and Drs. Thorburn, W. W. Ogden, Roseburgh, committee.

After the election, Dr. Agnew read an interesting communication, of which the following is a synopsis:—

* * * * * * * *

The passing year has not, so far as the city is concerned, been remarkable for any visitation of epidemic disease. Notwithstanding the almost unprecedented depth of rain that fell in May and the early part of June, and the long continued drought, and extreme heat of July and August, the health of the city may be said to have been very good indeed—quite up to the best average. During the year scarlatina of a peculiar type prevailed to a considerable extent, presenting an aspect not entirely new to medical observers, but still sufficiently novel to be worthy of notice The cases that came under my own observation varied considerably, but nearly all of them had the dual aspect, more or less marked, we should expect to meet in a simultaneous attack of measles and scarlet fever if that were possible. In some instances the coryza and bronchial cough usually preceding a simple attack of measles, with slight soreness, only of the throat, were the predominant symptoms, while in others the early symptoms were all such as usually usher in scarlet fever more or less severe. But the most noticeable peculiarity, so far as my observation has served me, was the rash, which presented in combination some of the characteristic appearances of both measles and scarlet fever. In most of my cases, however, the color of the eruption was of a duskier hue than usual, in the simple forms of those diseases, and in several fatal cases the prominent symptoms present apart from the eruption were those of the malignant type of scarlet fever. The susceptibility to the disease did not appear to me to have been affected by a former, and even recent attack of measles, and, in two or three instances it followed a former invasion of scarlatina.

The extreme and long continued heat of July and August resulted in an usual number of cases of sun stroke, both in this city and throughout the country, and many sudden deaths were recorded from this cause.

The usual class of summer complaints, affecting children, did not prevail to any alarming extent during the past season, although numerous additions to the death roll from gastro-intestinal affections may be considered the normal issue of the summer campaign. The comparative immunity from these affections in healthy country localities points out the duty of the profession, and I presume that most of us now recommend the prophylactic method of sending the children out of town before what may be called the sickly season has commenced. The circumstances of many, however, prevent them from availing themselves of this advice. They are compelled to face the danger of the city, and are often called to mourn the loss of little ones, who may have become the objects of fondest hope and dearest affection.

I do not know whether my experience coincides with that of my medical brethren in the treatment of summer affections of children, but my greatest difficulty and discouragement has been the lateness in which medical aid was sought. Most of the fatal cases occuring in my practice, were utterly hopeless before I was called upon, and I generally found that the little sufferers had run the gauntlet of the domestic list of remedies, and had then been treated by some dispensing chemist who, when death became imminent recommended that a physician should be called—ostensibly, I suppose, in the interest of the patient, but more probably for the purpose of avoiding personal responsibility, and fixing it upon a medical man. I suppose there is no help for this state of things but, if in the right of choice by parents, a fatal course is pursued, for the sake of economy, they are themselves the greatest sufferers, and it is manifestly unfair, in such circumstances, to attach odium to a medical man, whose humane calling forbids his refusing to risk his reputation in taking charge of the most unpromising cases, with a view to save life or relieve distress.

During the autumn and beginning of the winter seasons we usually have an invasion of remittent and typhoid fever, in this city. The cases seem to me to be of a sporadic character, and the disease is probably not traceable to any specific cause, but rather a combination of causes. If I might be allowed to enumerate some of these, I should suggest that the exhausting effect of long continued heat, producing in weakly persons a low vital condition, opens the way for this class of diseases. Add now, to this predisposition, insufficient clothing, insufficient food, bad well water, small bed rooms with closed windows and no other means of ventilation, and we shall not require to draw largely on bad drainage and malarious miasmata to find causes for the low type of disease generally prevailing at the close of the warm season. In the treatment of typhoid

fever, I have been in the habit of considering it a self-limited disease, and have trusted more to *vis medicatrix naturæ* than to strict therepeutics. My plan, for which I do not claim any special merit, consist in placing the patient in the best and most easily ventilated available room, enjoining quiet and the strictest cleanliness. I attach importance to directing the exact kind and quantity of diet, and the intervals at which it should be given; and this minuteness is especially necessary when stimulants are administered. The secretions are then attended to, and any local symptoms as they arise. I have found this "let alone" method much more satisfactory than any meddlesome effort I have ever made to "break" the fever and shorten its duration.

The re-opening of the Toronto general hospital during the summer, with additions to the medical staff, has been viewed with very general satisfaction, by both the profession and the public, and it cannot be otherwise considered than as a subject for lively congratulation that the Premier of Ontario is not only willing but that the people are ready to sustain him, in any effective scheme he may devise for relieving this noble charity from its embarrassments, and developing the humane purpose for which it was established to the utmost capacity of the institution. It is to be hoped that the present session of the Ontario legislature will not be allowed to close until a scheme shall have been adopted for providing ample means, in an equitable manner, for liberally endowing an institution, whose appeals are prompted by christian principle and made to our common humanity. To fail, in this respect, would be a reproach to us, as a christian people. It is to be hoped too, that the increased liberality of the hospital endowment will place within the reach of the trustees and medical staff the utmost facility for the classification of patients, and for the isolation of contagious disease. One cannot help shuddering at the bare possibility of a patient undergoing some slight surgical operation, and while an immate of the hospital, contracting, and, perhaps, falling a victim to some malignant, contagious disease, on account of defective classification. Such a possibility should not be allowed to exist, for any mere money consideration, in this Augustan age of science and philanthropy.

The formation of the "Canada Medical Association," and the success in point of numbers and debating ability of those attending its first meetings is to my mind, a subject for the liveliest congratulation. The work however, so far, has been of an initiatory or preliminary character, almost exclusively, and although many questions of great interest to the profession and the public at large, came before the notice of the association, yet I think it will be conceded that it remains for the next annual meeting

to give the association its character and rank amongst the scientific societies of the world. It is, therefore, to be hoped that at the Toronto meeting, next autumn, this city may have the honor accorded to her of inaugurating the real work of the association. But if the meeting is to be made a successful one, it can only be by early and persevering labor, and much of the responsibility and labor must devolve upon the medical profession of Toronto. In this connection I cannot help congratulating the medical section of the Canadian Institute, in having secured, for our chairman for the ensuing year, the able, learned and experienced vice-president of the Association. And I trust that nothing, on our part, in the way of hearty co-operation with Dr. Hodder, shall be wanting to give *éclat* to the next meeting, and crown it with the highest success. The experienced, senior members of the profession will, I trust, pardon me for hinting that we look to them to take the lead in contributing from their stores of learning some well matured scientific papers, and if these cannot be hurriedly prepared, the sooner they are commenced the better. I trust, too, that in this respect the medical section will give a good account of itself.

To give, however, to the Canada Medical Association a lasting vitality, it must have a permanent source of supply, and this, it seems to me, can only be secured by the formation of branch associations, embracing areas of convenient dimensions. The medical electoral divisions would, probably answer for this purpose, and the members of council might accept the suggestion to call their constituents together for the purpose of forming electoral associations, in affiliation with the Canada association, and named respectively after each division. The formation of such tributaries would not only give vitality and strength to the Canada association, but would, also, give compactness to the medical profession of Ontario, and, rising above the rivalries of the past, enable us to exercise that influence in the creation of public opinion, on all the great questions of social interest, to which by our numbers and habits of thought we are justly entitled.

The quiet and unobtrusive calling of the medical profession, and the unending round of duty its practice involves, forbid our entering the lists with many of the robustious demagogues, whose noisy declamations tend to make one think they have been sent on a special mission to turn the world upside down. It is, nevertheless, gratifying to observe that in Britain the medical profession is not only accorded a higher social position than ever before, but that the pursuit of scientific inquiry and the general attainments of physicians, make them considered to be in a high degree available to fill positions of the greatest honor and the highest public trust. And here, in this fair province of ours, the sprinkling of

able medical men in our Legislative Assembly, is conclusive proof that the people of this country are not backward to recognize true merit, though it may not obtrude itself by noisy demonstrations on their notice at every turn. It is no vain boast to claim that the healing art has in all ages, embraced within its circle, men of culture and of thought, and that science, in the broadest sense, has been much enriched by the research and learning of the medical profession. The close of the last century and the beginning of the present produced discoverers in the domain of medical science who may fairly take rank with Newton or Columbus, and the profession now, claims among its votaries, men of whom the world may well be proud. It is true that the seeming diversity in the medical theories of the day, has given rise in the public mind to the idea of a diversity of schools, and we have, in medicine, numerous offshoots and excrescences from the parent stock, just as we have in religion diversity of creed. Probably, however, in regard to both cases, these diversities arise from superficial examination of the subjects, and inaptitude or inability to grasp and apprehend the truth. For, doubtless, in each, there is but one legitimate school, and that one must be founded on truth, which is immutable.

It is impossible, then, to over estimate the value of establishing such a medical association as I have indicated. The leading medical men of each district would be brought frequently together, for the reading of papers, and the discussion of subjects of interest to the profession. Such meetings, while they would disseminate a vast amount of useful information, and give the profession the valuable experience, gathered year by year, by practical observation, in regard to the character and treatment of prevailing diseases, would, at the same time serve as a most wholesome and needed incentive to studious systematical reading. It has been, probably, too much the habit of the profession, in this country, to consider the goal as having been reached when their "license to practice" was secured. Human nature is the same in medical men as in other mortals, and it seems to be the tendency of human nature to fold hands and indulge in relaxation, whenever the spur of emulation or self interest is laid aside. The field is as open to original observers in the wide Dominion of Canada, as in any other part of the world, and these associations would form most valuable and influential media by which the professional world might be reached. And who can tell but the absence of such societies may have already condemned many a medical flower, "to blush unseen, and waste *his* sweetness on the desert air." At all events the establishment of such influential societies would place more surely within the reach of the studious physician, the reward always due to ability and earning.

But, I trust, it is not necessary to further enlarge on the desirability of forming such branch associations as I have indicated, and I hope these suggestions, emanating from the medical section ef the Canadian Institute, (should they meet your approval,) will be accepted in a friendly spirit by our brethren throughout Ontario.

And now, Mr. Chairman, lest my ramblings should grow wearisome, I shall close by wishing to you and to our brethren throughout Ontario and the Dominion, "a Merry Christmas and a Happy New Year," Happy family gatherings, good dinners and good appetites to enjoy them, not forgetting devoutest thanksgiving to the great author of good, "who giveth to all men liberally, and upbraideth not."

Dr. Agnew was warmly applauded at the conclusions of his address, and the cordial thanks of the meeting were, on motion of Dr. Hall, seconded by Dr. Ogden conveyed to him.

The meeting then adjourned till after the holidays.

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## HAMILTON CITY HOSPITAL.

We give below an abstract of the medical report of the Hamilton City Hospital, kindly forwarded to us by the resident Physician, Dr. O'Reilly.

*Medical Report oft he Resident Physician of the Hamilton City Hospital for the year* 1868:

| | M. | F. | T'l |
|---|---|---|---|
| Patients remaining in Hospital January 1st, 1868 | 24 | 24 | 48 |
| Patients admitted during 1868 | 239 | 193 | 432 |
| Births in Hospital during 1868 | 22 | 13 | 35 |
| Total No. in-door patients | 285 | 220 | 515 |

| | M. | F. | T'l |
|---|---|---|---|
| Patients remaining in Hospital December, 31st, 1868 | 26 | 19 | 45 |

The following table gives the number of patients discharged from Hospital during the year:

| | M. | F. | T'l |
|---|---|---|---|
| Discharged | 222 | 187 | 409 |
| Deaths during the year | 15 | 11 | 26 |
| Totals | 237 | 198 | 435 |

The following are the diseases which proved fatal during the year and the number of deaths from each disease, (including seven persons admitted to Hospital in a dying state). Coroners' inquests were held on th[illegible] of diseases.

| | | | |
|---|---|---|---|
| Ascites | 2 | Phthisis | 9 |
| Cerebritis | 1 | Injuries | 1 |
| Diarrhœa | 2 | Wounds | 1 |
| Heart disease | 2 | Peritonitis | 1 |
| Pneumonia | 2 | Puerperal convulsions | 1 |
| " Typhoid | 2 | Enteritis | 1 |
| " Tetanus, idiopathic | | | 1 |

The following is the result of treatment of those patients discharged during the year:

| | |
|---|---|
| Patients discharged cured | 314 |
| " " relieved | 93 |
| " " not benefitted | 2 |

The following are the diseases or injuries for which patients were admitted into hospital during the year:

| | | | |
|---|---|---|---|
| Abscess | 5 | Hysteritis | 2 |
| Abortion | 1 | Injuries | 27 |
| Alcoholism | 24 | Incontinence of urine | 2 |
| Anasarca | 1 | Impetigo | 8 |
| Anœmia | 1 | Iritis Syphilitic | 1 |
| Aphthœ | 5 | Mania | 2 |
| Anchylosis | 1 | Morbilli (measels) | 15 |
| Apoplexy | 1 | Morbus coxarius | 1 |
| Asthma | 3 | Neuralgia | 7 |
| Ascites | 1 | Orchitis | 1 |
| Bronchitis | 2 | Otorrhœa | 1 |
| Burns | 4 | Obstruction of bowels | 2 |
| Cancer | 1 | Ophthalmia | 5 |
| Catarrh | 3 | " gonorrhœal | 1 |
| Calculi, Urinary | 1 | Pneumonia | 19 |
| Coup de Soleil | 1 | " broncho | 3 |
| Colic, Lead | 1 | " chronic | 6 |
| Cellilutis Pelvic | 2 | " pleuro | 2 |
| Cerebritis | 1 | " typhoid | 2 |
| Chorea | 1 | Pleurisy | 3 |
| Contusions | 3 | Phthisis | 18 |
| Condylomata | 4 | Pertussis | 4 |
| Debility | 12 | Pleurodynia | 1 |
| Delirium Tremens | 9 | Pregnancy | 40 |
| Dyspepsia | 11 | Peritonitis | 1 |
| Dysmenorrhœa | 1 | Parotitis | 1 |
| Diarrhœa | 13 | Paraplegia | 2 |
| " Chronic | 3 | Psoriasis | 1 |
| Dysentery | 1 | Rheumatism, acute | 20 |
| Enteritis | 2 | " chronic | 3 |
| Erysipelas | 1 | Scabies | 12 |
| Epilepsy | 4 | Sciatica | 3 |
| Fever, continued | 2 | Strabismus | 1 |

| | | | |
|---|---|---|---|
| " intermittent | 6 | Strictures, urethral | 2 |
| " remittent | 2 | Sprains | 6 |
| " typhoid | 3 | Syphilis | 15 |
| Fractures | 6 | Tumor, syphlitic | 1 |
| Frost-bites | 3 | Talipes | 1 |
| Fistula, in ano | 3 | Tetanus, idiopathic | 1 |
| Gonorrhœa | 12 | Tinea decalvans | 1 |
| Granular eye-lids | 7 | Ulcers | 19 |
| Hœmorrhoids | 3 | " syphilitic | 2 |
| Heart, diseases of | 6 | Veins, varicose | 4 |
| Hemiplegia | 2 | Wounds, lacerated | 3 |
| Hydrocele | 1 | Wounds, gun-shot | 1 |

The following table classifies the patients admitted, according to their religious persuasion.

| | | | |
|---|---|---|---|
| Episcopalians | 162 | Baptists | 8 |
| Roman Catholics | 137 | Lutherans | 4 |
| Presbyterians | 67 | Unknown | 3 |
| Methodists | 51 | | |

The following table gives the nativity:

| | | | |
|---|---|---|---|
| Canada | 158 | United States | 18 |
| Ireland | 134 | Germany | 8 |
| England | 69 | Norway | 1 |
| Scotland | 41 | Unknown | 3 |

The following table gives the occupation or trade of patients admitted 1868:

| | | | |
|---|---|---|---|
| Bakers | 1 | Laborers | 85 |
| Barbers | 1 | Masons | 2 |
| Blacksmiths | 2 | Machinists | 5 |
| Bar-tenders | 1 | Nurses | 2 |
| Boiler-makers | 2 | News-boys | 1 |
| Brick-makers | 1 | Painters | 7 |
| Carpenters | 5 | Printers | 4 |
| " ship | 1 | Pensioners | 9 |
| Carriage makers | 2 | Porters | 2 |
| Cooks | 2 | Pedlars | 2 |
| Coopers | 1 | Prostitutes | 38 |
| Cab-drivers | 2 | Sailors | 4 |
| Coachmen | 1 | Sawyers | 1 |
| Carters | 1 | Seamstresses | 2 |
| Clerks | 5 | Switchmen | 1 |
| Chimney-sweeps | 1 | School teachers | 3 |
| Cabinet makers | 2 | Servants, Gen'l | 114 |
| Destitutes | 8 | Shoemakers | 4 |
| Druggists | 1 | Tin-smiths | 3 |
| Engineers | 1 | Teamsters | 5 |
| Farmers | 3 | Tailors | 5 |
| Grooms | 1 | Vagrants | 19 |

| | | | |
|---|---|---|---|
| House-keepers | 1 | Wool-carders | 1 |
| Hostlers | 9 | Writers | 2 |
| Joiners | 1 | Children | 52 |

The number of out-door patients attending the Hospital during the year was 331. Thirty-seven visits were made during the year, in cases of emergency, and to paupers "too ill" to be removed to Hospital.

TOTALS FOR 1868.

| | |
|---|---|
| Total Number in-door patients | 480 |
| " of births | 35 |
| " out-door patients | 331 |
| Total under treatment in 1868 | 846 |

C. O'REILLY, M.D.C.M.,
Resident Physician.

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We regret to observe the death of Dr. Litchfield, superintendent of the the Rockwood Asylum in connection with the Penitentiary at Kingston. Dr. Dickson surgeon to the Penitentiary has been temporarily appointed to discharge the duties of superintendant.

It is to be hoped that the Dominion Government which has the gift of marking the permanent appointment will exercise wise discrimination in their selection. These public appointments ought to be made a reward of merit, not in consequence of either local or political influence.

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We regret to learn the death of Dr. Thomas Hillier, of London, whose Manual of Skin Diseases, and more particularly his recent admirable treatise on diseases of children, had rendered his name familiar to every member of our profession.

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The Toronto General Hospital is now in a sufficiently prosperous state to admit fifty-three patients. Besides these, there are nearly as many more who gain admittance and are treated, by paying forty cents per diem. The number of extra patients are generally numerous.

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RETURNS FOR THE YEAR 1868.

Appended is the rate of mortality for the city of Toronto during the year just closed. For these returns we are indebted to Dr. Tempest, medical officer of the Board of Health for that city, who, notwithstanding the greatest obstacles, has presevered year after year in making the returns as perfect as the circumstances admit of.

Total number of deaths from abscess, 4; accident, 16; apoplexy, 10; asthma, 10; bladder, disease of, 2; blood-vessel, bursting of, 4; bowels,

inflammation of, 15; brain, congestion of, 16; do. disease of, 13; do. inflammation of, 5; do. softening of, 3; do. water on, 17; Bronchitis, 4; burns, 2; cancer, 7; catarrh, 1; child-birth, 16; cholera morbus, 4; chronic disease, 1; cold, 2; complication, 20; consumption 136; convulsions, 48; croup, 12; debility and exhaustion, 94; decline, 9; diarrhœa, 96; do. chronic, 1; diptheria, 10; dropsy, 17; drowning, 15; dysentery, 33; erysipelas, 2; fever, 7; do. bilious, 3; do. brain, 5; do. gastric, 1; do, intermittent, 1; do. typhoid, 11; do. typhus, 1; fall, injuries from, 3; fright, effects of, 1; found dead, 3; general decay, 3; gravel, 1; heart, disease of, 31; hip disease, 1; hooping cough, 27; inflammation, 39; influenza, 2; insanity. 5; intemperance, 4; jaundice, 2; kidney, disease of, 2; do. inflammation of, 1; leg, disease of, 1; liver, disease of, 9; lungs, congestion of, 10; do. disease of, 11; do. inflammation of, 36; measles, 9; neuralgia, 1; old age, 64; operation, result of, 1; paralysis, 25; pleurisy, 2; poison, effects of, 1; rheumatism inflammatory, 3; scarlet fever, 18; scrofula, 1; small-pox, 3; sore throat, 4; spasms, 5; spine, disease of, 3; do. injury of, 3; still-born, 86; stomach, disease of, 4; suicide, 2; sunstroke, 6; teething, 30; thrush, 5, tumour, 5; ulceration, internal, 1; worms, 3; unspecified, 37.

## TORONTO MORTALITY.

The following is the mortality of the city of Toronto for the month of December, 1868:—

Still born, 5; under one year, 17; over one and under 10 years, 15; over 10 and under 20 years, 6; over 20, 38; Zymotic diseases, 21; deaths from other causes, 60. Total deaths, Dec., 1868, 81. Zymotic diseases, Dec., 1867, 10; deaths from other causes, 61. Total number Dec., 1867, 71; increase, Dec., 1868, 10.

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## CANNABIS INDICA IN SENILE CATTARRH.

Dr. J. Curran Waring writes to say that he has found cannabis an invaluable remedy in catarrhus senilis. He administers it in ten-minim doses gradually increased. Its effects, he says, must be seen to be thoroughly realized. He believes that as an anodyne it is immensely superior to every other drug.—*The Practitioner.*

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Asthma.—Dr. Begbie reports of having cured two cases of asthma of long standing, where the patients had renounced all hope of benefit from drugs, by the use of Bromide of potassium in full doses, night and morning.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Pancreatic Abscess with Pyæmia.* Under the care of JOSEPH M. DRAKE, M.D. Reported by THOMAS G. RODDICK, M.D., Asst. House Surgeon, Montreal General Hospital.

Robert Clarke, æt., 30, baker by trade, was admitted into the Montreal General Hospital as a case of consecutive syphilis, under Dr. Drake, attending physician, on the 3rd February, 1869.

*Condition on Admission.*—His general appearance was not that of a strong man, and his features presented a peculiar pinched and shrivelled look. He ate comparatively well, however, and indeed requested more food the day after admission. He complained of no pain whatever, and when questioned declared he felt better than for some days previous. His ailment were two sores on the penis, one at the margin of the meatus and the other on the prepuce;—also too indolent dry-looking ulcers with no indication of granulation, oval in shape and situated, the one on the anterior fold of the axilla on the left side, the other on the outer side of the right thigh immediately over the trochanter. Neither of the latter had a drop of pus on the surface, and were very dry and puckered looking.

*History.*—His parents were very healthy people and died but a few years since at an advanced age. He has two brothers both of whom are in Scotland, and in the enjoyment of good health. He knows of no tendency to consumption in either branch of the family, and says his ancestors were noted for their longevity. While in England, fourteen years ago, he had intermittent fever and did not get thoroughly over it for more than a year, and he thinks he had a slight touch of it again seven years ago, but of the latter he was not very certain. He came to this country

twelve years ago, and soon after caught a severe cold which laid him up for a couple of months during which time he coughed incessantly and lost considerable flesh. His appetite was also during this illness much impaired, and he thinks his health has never since been as good, in fact he has ever since been more or less troubled with a cough. Seven months ago he contracted a chancre for which he was treated with a wash and some mixture internally, which he took regularly for weeks. He does not known whether or not there was any preparation of mercury in the medicine, but some little time before he came into hospital he noticed a peculiar taste in his mouth, and at that time he was taking the same medicine. Six weeks, or thereabouts after the first appearance of the chancre, he noticed two little lumps beneath the skin in the position of the ulcers before mentioned. These lumps had all the character of tubercles and before they broke had attained the size of small marbles. After ulcerating through the skin they became in a week as large as a quarter dollar and when he came into hospital were considerably larger than a half crown. As to his habits, he had of late years been addicted to occasional bouts of drinking, and had been especially intemperate during the past twelve months. He gave as a reason for his conduct latterly that he could eat little or nothing and was obliged to drink to sustain life. When intoxicated he would sleep in some exposed place for nights together, catching fresh cold and otherwise crippling his health. At this time also he was very much troubled with diarrhœa.

*February 4th*, 1869.—He was given full diet and put on Green's mixture made by the following prescription, ℞. Hyd. Bichl. gr. i, Potas. Iodid. ʒ ij, Ext. Sarzæ fld. ℥ i. Aquæ ad ℥ vi. A tablespoonful thrice a day.

Also for the sores, lotio acid carbolic and lotio nigra to be applied to the chancres. Bowels regular and tongue clean.

*February 6th.*—The sores have a somewhat more healthy appearance. The carbolic acid wash is discontinued and Ung Hyd. Biniodid substituted in the strength of gr. v. to ℥ i. lard.

*February 10th.*—Gives a good report of himself as to general health, and the ulcers are certainly much improved. No change in the treatment.

*February 13th.*—Continues to improve in every respect. His appetite is much better and he feels as though he might be better out of bed, but his clothes are denied for a couple of days.

*February 15th.*—He is very unwell to-day, having vomited several times during the night. From the exertion he is likewise much exhausted and his bowels have not been opened for two days. On the supposition that

constipation is the cause of the trouble he is ordered an injection of castor oil and turpentine, with a sinapism over the region of the stomach where slight pain is complained of. The bowels being unopened late in the evening, he got a seidlitz and a simple injection.

*February* 16*th.*—Bowels not yet acted. Ordered simple injections every two hours and ℞ Sodœ Bicarb ʒ ij, Ether Chlor ʒ iv, Aquæ ad ℥ vi. A tablespoonful every four hours. Has vomitted several times since last evening, pulse 110. Skin dry and hot, features drawn, no desire for food, but great thirst.

*February* 17*th.*—Bowels moved freely last night, condition somewhat improved, pulse 106, tongue furred and yellow. Has vomited only once in the past twenty hours.

*February* 19*th.*—The bowels have been moved twice since yesterday morning. He is much the same as on the 17th. Had a chill last evening followed by profuse perspiration. During the chill his teeth chattered, the bed shook and the surface and extremities became very cold showing every character of a severe rigor. The tongue is not so furrred and yellow as for the past two days. He has vomitted only once since yesterday morning and the amount was very trifling. He is thought considerably better.

*February* 20*th.*—Pulse 115, temperature 101. Not so well to-day. Vomited frequently during the night and he complains of slight pain in the bowels. Has had three stools already this morning, and looks much worse than yesterday. Had a rigor yesterday afternoon at 4 o'clock and another this morning between 8 and 9 o'clock. The last was a very slight one. Tongue thickly furred and yellow, stools thin and green in colour. His appetite is gone and he cares for nothing but an acid drink.

*February* 21*st.*—No change for the better. Bowels have been very loose. Tongue same as yesterday pulse 120, temperature 101⅘. Had three rigors last evening and this morning, all followed as before with the most profuse perspirations, his eyes look wild and staring. He sleeps a great deal and can be roused with difficulty. Before he answers a question he must needs consider a few moments as though memory failed him or his ideas were scattered. Although he has no pain, still from the typhoid character of the disease it is thought advisable to apply hot stoups over the abdomen to be repeated often in the day. He is also ordered in place of the last: ℞ Acid Hydchlor ʒ i, Etter chlor ʒ ij, Aquæ ad ℥ vi. A tablespoonful every 4 hours.

*February* 22*nd*—Had one rigor last evening and another at 8 o'clock this morning. Pulse 125—temp. 101⅘. Diarrhœa very bad with dark green watery stools. No pain whatever in any part. Still has that wild appearance noticed yesterday. Tongue dry and brown with a yellow

streak in the centre. Skin slighly jaundiced. The stomach can tolerate no food. Has vomited two or three times since midnight. Is becoming very weak and prostrate. Two ounces of whiskey are ordered with as much beef tea as he can comfortably take.

*February 23rd.*—He is evidently failing. Pulse 145—temp. 102⅕. Tongue dry, brown and fissured. No pain whatever. Had a rigor about 3 o'clock this morning, and another at 10. Diarrhœa slightly checked by two powders containing each gr. x Pulv Doveri, which he got last night. Is ordered instead, Pulv Cretæ Co c̄ Opii gr xx, every fourth hour. From the intermittent character of the disease, and also from the obstinate diarrhœic character of the stools and jaundiced condition of the skin, some blood contamination is suspected. The liver is found of normal size, but the spleen is considerably enlarged, which may be explained from his having had ague. He complains of no pain whatever in any part. The eyes and expression have the same wild appearance, but there has never been pain in the head or the slightest sign of delirium. The chest was examined to-day, and slight dullness found in the upper part of the left lung, with small bubbling over the greater part of that side, and also at the right apex. Thought to be an intercurrent attack of bronchitis. A sinapism was ordered over the whole front of the chest; also the following mixture, the last to be discontinued: ℞ Quin Sulph gr xij, Acid Sulph q. s., Aquæ ℥ vi., a tablespoonful three times a day.

*February 24th.*—Urine examined this morning, but no albumen found; it is high-coloured, however, and has a strongly ammoniacal odour. He seems slightly better to day. The powders have lessened the number of stools considerably, but they have now a most offensive odour and are still very thin and green-looking. Temp. 102—pulse 135. Tongue not so dry but very yellow. He has had only one rigor in the past twenty-four hours. Exactly the same condition of things exist in the chest. The skin is not quite so jaundiced.

*February 25th.*—Is so much weaker to-day that he needs to be lifted in and out of bed. Was at stool some half dozen times in the night, and passed the discharges in bed once or twice this morning. Is evidently failing rapidly. More whiskey ordered. He had two rigors at short intervals last evening, and indeed one was so severe that he was thought to be dying. Pulse down to 120, and very weak and compressible. His temperature was not taken, but the extremities have been cold all day. He sleeps almost continuously, and has the same wild appearance. The pupils, however, have never altered all through the disease. Urine contains no albumen.

*February 26th.*—Pulse 110—temp. 101⅕. Diarrhœa very profuse and stools passed involuntarily. No rigor since last evening. Tongue

dry, fissured and brownish yellow in colour. A cadaveric odour is very noticeable to-day. Same condition of things in chest as when first noticed, but it is difficult to hear anything owing to a quantity of mucus which is constantly rattling in the throat. Continued to sink rapidly all day, and died soon after midnight.

A diagnosis of pyœmia was made forty-eight hours before death.

*Autopsy*—Fourteen hours after death.

*Pleura*—Strongly adherent, but not much thickened. Adhesions old and thoroughly organized.

*Lungs*—Right—In apex well marked grey infiltration. A nodular looking mass in centre of upper lobe, raised above the surface with well defined limits, of a chocolate brown colour, size of a walnut, and from which on pressure, pus exuded at numerous points. The rest of the lung looked comparatively healthy and floated, all except the apex. *Left*—In the apex three vomicæ, the largest of which would contain a filbert or about 6 lines by 4, all possessed anfractuous walls with well marked living membrane, and on pressure a mixed purulent fluid exuded. Lung tissue in vicinity much condensed infiltrated with a slate coloured, and quantity of white fibrous looking material. Two nodules similar to the one in the other lung, one in the middle, the other in the lower lobe. The lung tissue elsewhere presented some minute tubercular granules, but chiefly in middle of lower lobe.

*Liver*, weighed 5lb 11ozs., dark and congested in appearance. Several abscesses, varying from the size of an egg to that of a large marble studded the right lobe, and on cutting into it pus exuded at a number of points. Capsule thickened and strongly adherent.

*Pancreas*—Firmly adherent to neighbouring parts, and the head so much altered in shape as to be almost unrecognizable. On cutting into the tumour an abscess was discovered containing about an ounce of pus. The abscess was evidently of some standing, judging from the thickness of the walls and the strong attachments on the exterior. The pancreatic duct at the greater end was dilated to fully half an inch. At the point where the duct opens into the duodenum a number of pancreatic concretions were found varying in size from that of a common white bean to very small fragments. Some were rough and presented a branched appearance as though corresponding to some of the ramifications of the duct. Others and more especially the largest in size presented several facets, circular, and oval, somewhat impressed and almost all of a deep greyish black colour, and metallic lustre. The latter quality was so strongly impressed on some as to be compared to the metallic crusts of arsenic or antimony.

*Spleen*—weighed 11½ ozs, contained no pus.

*Kidneys*—right, weighed 7 ozs, presented a pale mottled look, cortex much thickened, and encroaching on pyramids, latter very pale, no pus. *Left*, differed only in being ½ oz. heavier.

*Intestines*—no ulceration, looked sufficiently healthy. Might have been disease in the rectum, as it was the only portion not examined.

*Brain*—very firm but healthy.

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## REVIEWS AND NOTICES OF BOOKS.

*A Rational Treatise on the Trunkal Muscles, Elucidating the mechanical cause of Chronic Spinal, Pelvic, Abdominal, and Thoracic Affections, and of Bronchial and other derangements incedent to the clerical, legal, and musical professions;* with the rational of their cure by mechanical support. By E. P. BANNING, M.D., Published by W. A. Townsend & Adams, N. Y. Octovo, p. 352.

The main portion of this treatise appeared originally in the *Philadelphia Medical and Surgical Reporter*, where we enjoyed the reading, as portion after portion appeared, with more than ordinary relish. While we are not prepared to accept all of the deductions the author has arrived at, we must in justice say we are convinced of the truthfulness of many of the pathological and therapeutical statements advanced. To give our readers a correct knowledge of this original and we think valuable work, we cannot do better than insert his "Fundamental Propositions."

I. "Inasmuch as the human body is purely mechanical in the formation and arrangement of all its parts, from the grossest organs to the finest cells, it follows that any variation from the primitive arrangement of any one of these must involve corresponding morbid manifestations, both mechanical and vital, not only in the parts immediately concerned, but also in those which are associated with them, either by juxtoposition, continuity, or function.

II. The viscera are as much under the law of a specific orbit of being and bearing as the bones, and any departure from this, will consitute a practical dislocation, which may involve corresponding functional derangements by cancelling the primary relations between these organs and their vital forces.

III. The normal status of these weighty, lengthy, fragile, and irritable viscera, consists mainly in their being maintained in the ascendent

by their surrounding elastic abdominal walls, in opposition to a state of consecutive dependency from their ligamentous attachments.

IV. In proportion as the body is erect, and the abdominal and dorsal tissues energetic, will this primary ascendent position be steadily maintained, the support being commenced at the lowest intestine, and carried up by each successive viscus to the apex of the pile, each supported organ becomes the successive and aggressive support of its next superior neighbour.

V. In proportion as these supporting tissues relax from any cause, there must ensue a corresponding change in the visceral status, they must lose their attitude, compactness and support, and assume a loose, dangling, and elongated condition. In other words, a lineal dislocation is induced, involving a train of both physical and functional derangements, such as a solid common sense might clearly foretell."

From the propositions it will be understood that any deviation from the normal character of the spine will result in pathological conditions more or less important, both in the spine itself, and in those structures of the body depending upon the spinal column for support. The author classifies these affections into *Spinal Deformity*, *Uterine Displacements*, *Muscular Laxity of the Inferior Extremities*, *Muscular Laxity of the Urinary Organs*, *Muscular Laxity of the Intestinal Canal*. When we call to mind how many and varied are the affections embraced under these headings, we at once see the importance of the subjects with which the author deals. And we think the author has succeeded in showing that a deviation from the natural symmetry of the spinal colum is a common cause of many visceral diseases, especially displacements.

The therapeutical part of Dr. Banning's work is interesting and novel. Interesting not because novel, but in consequence of the practical theories upon which his treatment of spinal affections is based. Of course his treatment, as would be inferred from his propositions, consists of mechanical support. We have used his "Abdominal and Spinal Shoulder Brace" in cases of antero-posterior deformity, attended with uterine displacement and with decided relief to the patient. With respect to the Uterine Balance recommended we have some doubts as to its essential benefit. We cannot imagine a patient comfortable in mind or body while employing it. But taking the book as a whole we must express our cordial approbation. The popular style adopted by the author may with some be objectionable, but we think it excusable from the fact that the public require to be educated upon a most important matter. We strongly advice every practitioner to read the work; it contains many valuable suggestions, and much food for thought.

*The Diagnosis, Pathology, and Treatment of Diseases of Woman, including the Diagnosis of Pregnancy.* By GRAILY HEWITT, M.D., F.R.C.S., Professor of Midwifery in the University College, London. Philadelphia: LINDSAY & BLAKISTON; Montreal: DAWSON BROTHERS.

The author of this volume is a most laborious student in the study of diseases peculiar to the female sex, and the present book is the result of many years patient research. Although this is the first edition that has been printed on this side the Atlantic, it is a reprint of the second London edition, which in some important respects differs from its predecessor. Dr. Hewitt evidently considers the first object of clinical observation to be diagnosis, and beyond question he is right. Without it no advance can be made, but on the improper basis of surmise and conjecture. In fact everything turns on the diagnosis, and once that has been made, it is tolerably clear sailing. In the words of Dr. Meigs, "Diagnosis is, in practice, like Captain Greatheart, in Bunyan, encountering and overthrowing all obstacles, so that even Apollyon himself could by no means oppose a bar to his habit in his practice of succeeding always." In no class of affections is its importance more fully verified than in the diseases of women—none, perhaps, where a wrong diagnosis is more disastrous to the patient or destructive to the reputation of the practitioner. The following extract from the preface will give an idea of the arrangement of the work:

"In regard to the mode in which the subject is considered, the first part of the work—that treating of diagnosis—differs from most other systematic treatises on the subject of diseases of women, symptoms, not pathology, having been made the basis of the arrangement. This arrangement and mode of considering the subject of the diagnosis has been found best adapted for carrying out the object of the work, inasmuch as it is the one actually followed at the bedside. The difficulties encountered by everyone in the first attempt to investigate disease clinically are considerable; the subject is not presented to us at the bedside pathologically, and to suit our convenience. It is the symptom, the sign, with which we have then to deal; and before a diagnosis can be made, we must know how to give to each of these signs it proper signification. Every practitioner who has acquired facility in diagnosis possesses, in his own mind, a sort of dictionary, to which he, from time to time, refers, in order to ascertain what diagnostic value a particular sign possesses, when present under such and such circumstances; while forming a conclusion in any particular case, he passes rapidly in review all the morbid conditions or diseases with which he has known the sign in question to

be associated; carefully bearing in mind the many exceptional cases to general rules which his predecessors left on record, or which have been observed by himself. To the student, however, the disease or morbid condition presented by the patient speaks in an unknown language—one which must be learned before a diagnosis can be arrived at; and thus it becomes an object of primary importance to the investigator of disease, that means should be available by which the value of symptoms and signs, as diagnostic of certain affections, may be duly estimated. The plan followed in the present work, will, it is believed, offer facilities for the kind of valuation required."

The pathology and treatment of diseases peculiar to the female receive considerable attention from Dr. Hewitt, more so in this than in the first edition. Many original views are expressed on uterine pathology, which he informs us, have been arrived at after a careful comparison with the views of others, corrected by cases which came under his own observation. It is a thoroughly practical volume, and *per se* much valuable information can be obtained from its perusal.

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*Atlas of Venereal Diseases.* By A. CULLERIER, Surgeon to the Hôpital du Midi. Translated from the French, with notes and additions, by FREEMAN J. BUMSTEAD, M.D., Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. Philadelphia: HENRY C. LEA; Montreal: DAWSON BROTHERS.

In a recent number of the Journal we expressed our opinion of the very great value of this work in the study of Venereal Diseases, and we have now to acknowledge the receipt of Parts IV and V, the issue of which completes the Atlas. If it were possible, we would venture to assert, that the cromo-lithographs of the two last parts excel those previously issued; certainly they are admirable as works of art, and thoroughly correct in the colouring. Part IV opens with the concluding portion on chancre, and then follows the complication of chancre, phagedæna, one of the most troublesome, being fully discussed. Chapter III is on Buboes, and although perhaps one of the most annoying class of cases which fall under the eye of the surgeon, we confess to some disappointment in the description of the treatment, which the translator has not enlarged upon. In this chapter, the translator and editor endeavours to show that when doctrinal points are not under discussion, Mr. Cullerier, follows practically the deductions of "duality." Dr. Bumstead objects to the term the author uses to denote a non specific bubo, viz. Sympathetic, and suggests that it be styled the Simple, or

the Inflammatory Bubo. We confess we fail to appreciate the value of the alteration. Chapter IV opens that portion of the work devoted to Constitutional Syphillis. While it is not exhaustive, it contains matter calculated to give all who carefully study it much valuable information. Part V continues the subject of Constitutional Syphillis—the chapter on Infantile Syphillis being an admirable one. The concluding chapters are on the tertiary forms of the disease. We believe all who have purchased Dr. Bumstead's own volume should obtain this Atlas, which is certainly superior to anything of the kind ever before issued on this continent.

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*The Physicians Dose and Symptom Book, containing the doses and uses of all the principal articles of the Materia Medica, &c., &c.* By Joseph H. Wythes, A.M., M.D. Eighth Edition. Philadelphia: Lindsay & Blakiston; Montreal: Dawson Bros.

This little volume is one which has met with much commendation from our friends in the United States, and which we understand is in general use among them. It certainly contains a very large amount of information, packed, so to speak, in a very small compass; the size of the book being such that it can be very conveniently carried in the pocket. The preface tells us that it was originally compiled for students, but in our judgment it is more suited for the country practitioner, who often tired and exhausted by long and tedious journeying is in no disposition to read complete treatises. To our country friends we can honestly recommend it.

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*Lectures on the Diagnosis and Treament of Functional Nervous affections.* By C. E. Brown Sequard. Part 1. Philadelphia: J. P. Lippincott, & Co.; Montreal: Dawson Bros.

Anything coming from the pen of such an able authority as Dr. Brown Sequard, will ever be welcomed by the profession; and the lectures of which this part is the first instalment, promise to be exceeding valuable. The treatment to be adopted receives ample attention, more we fancy than Dr. Sequard has usually given in former works. In cases of Epilepsy, we notice that he recommends a combination of the Bromide and Iodide of Potassium with Bromide of Amonium, as in his experience the most efficient remedy. In chorea, he prefers Arsenic or Strychnia, and in Hysteria, he eulogised Opium and Sulphuric Ether, given in large doses.

# PERISCOPIC DEPARTMENT.

## Medicine.

### ON THE THERAPEUTIC USES OF BROMIDE OF POTASSIUM.

By J. Russell Reynolds, M. D., F. R. C. P.

The therapeutic effects of bromide of potassium are seen with the greatest amount of certainty and clearness when it is given to those who are suffering from paroxysmal diseases. The uses of this drug are, however, not limited to those affections, but may be observed in many others of which obvious spasm forms no part. It became a "fashionable" medicine a few years ago; and, like some of its predecessors in the circle of fashion, was soon over-rated, and misapplied; it failed to do in all cases what it had been said to do in some; occasionally it appeared to be mischievous, and often it seemed inert; and so, within the last few months, there have arisen those who entertain doubts as to its possessing real value in the treatment. Being confident, however, that it is one of the most important medicines that we possess, it will be well to illustrate, at the outset of this paper—by a few cases, recorded as briefly as possible—the fact of its definite utility. Having done this, it will be sufficient to give only the general results of its employment in other classes of disease, where the action of the medicine may be defined with a somewhat inferior degree of precision.

It is purposed, therefore, first to speak of the use of the bromide in the treatment of the following groups of disease:—1. Those marked by spasmodic contraction of the muscles. 2. Those characterized by disturbances of sensation. 3. Diseases displaying themselves in mental change; and 4. Affections of the vaso-motor system of nerves. A few remarks will then be offered on 5. The mode of action of the medecine; and 6. On bromism.

I. Of those diseases which are characterized by *spasmodic movements*, the action of bromide of potassium is most conspicuous in epilepsy; and of this fact, the following cases will afford sufficient illustration:—

*Epilepsy.*—A man, epileptic for eighteen years, his fits having commenced at puberty, and having recurred withgreat severity and at a high rate of frequency during the whole period, took bromide of potassium for the first time in January 1864; and from that date until this has never had a single seizure. The dose prescribed in this case was ten grains, to be taken three times daily; it was continued for nearly twelve months, and was then abandoned. There was no other medicine employed, nor was there any change made in the place or mode of living of the patient.

A lady, epileptic for eight years, the fits being of most distinctive character, and of frequent but irregular occurrence; and who during the intervals of attack, suffered much from "nervous feeling," great depression of spirits, incapacity for mental occupation, and constant "dread," commenced taking the bromide four years ago. Ten-grain doses were prescribed, and with the effect of prolonging the intervals between the attacks; but as the seizures returned, the quantity was increased, and again the fits for a time disappeared. They returned, however, for the third time, and the dose was augmented further. Similar events happened until the quantity of bromide administered was thirty-five grains, three times daily. This dose was commenced a year and a half ago and since that period there has been no attack. The general health has been unimpaired, the nutrition of the body has been maintained, the menstrual functions have continued with perfect regularity, and almost the whole of the distressing feelings which formerly occupied the intervals of attack have disappeared.

A gentleman of middle age, overworked both mentally and physically, became epileptic, four years ago. His attacks were of the severest kind, but during the intervals of their occurence he presented no signs whatever of disease in any organ of the body. His attacks had been frequent and uncontrolled by "change of air," freedom from toil, dietetic regulation, and medicine. He began to take the bromide, in ten-grain doses, two years and a half ago, and immediately the fits ceased, and they have not returned. Here there was no change in the mode of living, but the individual referred to continued to do the same kind and amount of work that he had done before. The medicine was gradually diminished at the end of twelve months, and was discontinued a year ago.

A young lady, epileptic from early childhood, and whose fits were of very frequent recurrence, it being rare for her to pass through twenty-four hours without a seizure, and who suffered on an average two fits a day, was first seen by myself several years ago, before the bromide of potassium had been employed in large doses. The drug was then given; but as it appeared to exert no influence upon the nature or number of the attacks, was discontinued, and other measures were employed without any beneficial effect. The intellectual faculties in this instance were most gravely injured. The patient could still read, but could not enter into anything even approximating sensible conversation. There was, however, no impairment of the "general health," and as, in spite of all treatment, the fits recurred with unaltered severity and frequency, all medicine was discontinued, and the patient was left to the care of her attendant nurse. She was lost sight of by me for nearly three years;

but eight months ago I was again called to see her, as she had been rather more "restless" than usual in the intervals of her attacks, and it was hoped that something might perhaps be done to lessen the labors of her attendant. I then learned that the fits were as frequent as they had been in previous years, and that they had never shown any tendency to lessen or to change. The bromide of potassium was given in scruple doses, every six hours, and, from that day to this, there has not been one single fit. There has been no change, while taking these doses, in the uterine, or general health; but there has been distinct although slight improvement in the mental powers.

A young man, epileptic for seven years since puberty, and having from five to seven attacks during the day, has taken the bromide of potassium for nearly four years, and with this result—that as the dose has been gradually increased the fits have diminished, and have now entirely subsided. Upon many occasions the attempts were made to lessen the dose; but within a few days of making such change in quantity, it was invariably observed that the fits recurred; and therefore, as no ill effects were recognized from its administration, it has been, and still is, taken in large quantity.

A lady, subject to frequent attacks of *le petit mal*, and to occasional seizures of *le haut mal*, gradually lost both forms of paroxysm when the dose of bromide had reached thirty grains, three times daily. During fourteen months there was no attack of any kind, but at the end of that time, having diminished the dose of the medicine, the fits returned; they have, however, again ceased upon reverting to the larger quantity.

The facts that I have now briefly stated are sufficient to show that the influence of bromide of potassium upon epilepsy is not to be referred to the "chapter of accidents," but that it is an agent possessing a very distinct and beneficial effect upon one of the most distressing and obstinate of diseases. These cases are by no means rare or exceptional; they are on the contrary, but a few specimens of what has been observed in very many others, and they are brought forward here in order to remove all doubt that might exist in the minds of some, who have not personnally observed the action of the medicine in a large number of cases, as to its real efficiency. There is yet a further object in their citation, and it is this, to coroborate these general propositions—which it would be impossible to substantiate by details in this paper—viz., that in the vast majority of cases bromide of potassium is of signal service in the treatment of epilepsy; that it absolutely cures very many, and it rarely fails to diminish notably the number of attacks in those whom it does not cure.

As with other modes of treatment, not only of this disease but of all others, it is most successful in recent cases; but, as I have shown by examples, it does not fail to be of service in those of long standing; and it most certainly is as useful in those cases where the fits are frequent and severe, as it is in others where they are of rare occurence and of milder type. In some persons it fails to exert any beneficial influence; but these instances form an exceedingly small minority; and in the present state of uncertainty with regard to the exact pathology of the large group of diseases constituting what we term "epilepsy," such instances should not be allowed to detract from the reputation of so useful a medicine, but should only stimulate inquiry as to the nature of their departure from the more ordinary type of the disease.

The cases of epilepsy which have proved the most amenable to the action of bromide of potassium are those in which the attacks have been exclusively or prevailingly those of the severer type, *le haut mal;* in which the rate of recurrence has been rapid; and in which the fits have occurred mainly during the day; whereas, on the contrary, those that have resisted its action have been marked by a predominence of slight or abortive seizures, *le petit mal;* or have exhibited the severer attacks at rare intervals, or have suffered from them only during the night.

These statements, it must be remembered, are not absolute; they express only the general results of observation on many hundreds of cases; and particular exceptions occur to them in each direction.

*Epileptiform Convulsions*, occurring during the course of chronic or acute diseases of the brain, are often completely removed by bromide of potassium, the other symptoms of such diseases being in some cases relieved, in some removed, in others unaffected. Thus, a gentleman fifty-five years of age suffered an apoplectic seizure, was insensible for many days, hemiplegic on the right side, and frequently convulsed. Upon the return of consciousness the hemiplegia, gradually diminished, but he remained aphasic, of enfeebled intellect, irritable temper, and a constant sufferer from pain in the head. Occasionally he improved slightly for two or three days, but was again thrown back by epileptiform convulsions. This state of things lasted for six months, during which time he was treated actively with many drugs and other appliances. Nothing, however, influenced the course of the disease until bromide of potassium was administered, when the fits ceased entirely, and have shown not the least threatening to return. Besides the effect mentioned in this instance, there was distinct relief to the headache, and some slight diminution of the irratability of temper. This case is but one of very many illustrating a similar action of the medicine.

*Convulsions, not epileptiform* in type, have sometimes been reduced by bromide of potassium, but, so far as my experience extends, only to such degree and with such irregularity as to make me doubt whether or no the relief was other than accidental. For example, a gentleman who after an injury to the back suffered several violent convulsions of epileptic character, became subsequently affected with persistent clonic spasms of the limbs. These spasms were sometimes so violent as to keep the patient in bed for many consecutive days, preventing him also from sleeping at night. Bromide of potassium appeared upon several occasions to diminish, and upon two or three to remove the spasms; but upon other occasions it failed entirely and it happened to me more than once to witness the return of the spasmodic movements while the medicine was being continued, and that in large doses.

In very many instances of *general spasmodic jerkings*, occuring only at night, I have given bromide of potassium, but unfortunately without observing any distinct remedial effect. The cases to which reference is made are by no means rare; the patient exhibits no irregular or spasmodic movement in the daytime, and while awake, but the moment that sleep comes on there are violent spasms of the muscles of the back and limbs, which sometimes throw the body off the bed,but when not sufficient to do this are quite enough to cause alarm and prevent the return of sleep. In some such cases I have given the bromide to the extent of causing bromism, but without finding that it produced the smallest effect upon the symptoms, whereas in a few milder examples there was relief. A somewhat curious case may be mentioned here, for the double purpose of illustrating the above general statement, and of showing the great difference to be observed between the action of bromide of potassium and of iodide of potassium. A gentleman æt. thirty, had, five months after his marriage, suffered from the spasmodic movements above described; he then became epileptic, and continued so for three months. He was, when seen by me, intensely anæmic, but not weakened in limb, intellect, or appetite. He was prescribed iron, quinine, and cod liver oil, and never had another epileptic seizure. His health appeared quite restored after the lapse of six months, with one exception, viz., the persistence of nocturnal jerkings. These were sometimes very severe, sometimes slight; but bromide of potassium exerted not the smallest influence upon them; and the same may be said of belladonna, stramonium and opium. They were, however, reduced considerably by Indian hemp. Two years after the onset of symptoms this gentleman was exposed for a long time to cold and wet, his eyelids swelled very slightly, he suffered from severe headache, became again intensly anæmic, lost flesh, and was

found to be passing urine so heavily loaded with albumen, that it was rendered solid upon boiling. The nocturnal jerkings were worse than ever, and the general strength was greatly depressed. Treatment was adopted vigorously in this case, but without any effect upon the anæmia, the albuminuria, the headache, or the jerkings. After several weeks had passed in this condition, the patient directed my attention to a recent swelling on the front of his leg. I found a node upon the tibia, a few scurfy, copper-colored spots upon the chest, and at once ordered iodide of potassium in large doses. The headache, albumen, jerkings, and node disappeared together and within two months a healthy tint was observed on the face and lips. Two years have elapsed, and during that period his wife has become pregnant, he has been free from jerkings, has gained flesh, is now in good condition as to strength and color, and there is no trace of albumen in the urine. This case is only one among many which illustrate the difference in action between bromide and iodide of potassium; but one which it seems to me to be important to quote, inasmuch as I have often heard the two medicines spoken of as being closely analogous, if not almost identical in their mode of operation.

*Hysteric Convulsion* has been, in my experience, but very slightly influenced by the bromide; and the same may be said with regard to hysteric spasms. The nearer that a case of hysteria approximates one of epilepsy, both in its general features and in the characters of its attacks, so much the greater has been the utility of the drug. Those cases, on the other hand, in which there has been no distinct convulsions, but only an assemblage of so-called "hysterical symptoms," of which sundry spasmodic movements are among the most striking, have appeared to me to be often utterly unaffected by even very large doses of bromide of potassium.

*Chorea.*—In this disease there are two classes of motor disturbance which may be readily distinguished; the one is clonic spasms, more or less intense and persistent, which may be seen while the patient makes no attempt at voluntary movement; the other is a want of "co-ordination" of muscular action, seen only when such attempts are made. In all choreic cases both elements co-exist; but in some the first, and in others the second predominates. Where the principal failure has been the want of co-ordination, bromide of potassium has appeared to me to be absolutely inert; where on the contrary, there has been much clonic spasms, and but trifling disturbance of co-ordination, it has sometimes seemed that the spasms have been affected beneficially by the drug.

Chorea, however, speaking generally, has in my experience been uninfluenced by this medicine. It is one of those diseases which, as a rule

yields so readily to simple hygienic treatment, that no safe conclusion as to the value of a drug can be obtained unless the patient be placed in circumstances which exclude that source of fallacy. Again and again I have taken choreic patients into hospital, for the express purpose of observing the effects of bromine; but have always carefully abstained from giving any medicine until the results of good nursing, good feeding, and the position in a large airy ward, could be distinctly recognized. It has invariably happened that all ordinary cases of chorea have begun to improve directly, and that they have recovered without any medicine; whereas in very severe cases, with or without complication, bromide of potassium has failed to exhibit the smallest remedial action.

In a marked case of congenital chorea, general in its distribution, and persistent for twenty-four years, the bromide was given in extremely large doses without producing any effects whatever except those of bromism. In another case of chorea, of three months' duration, the child being unable to sit up or speak, improvement commenced at once upon admission into hospital; but it proceeded tardily for a fortnight. At the end of that time bromide was given in full doses, but it appeared rather to retard than to expedite the process of recovery.

M. Gubler relates cases which appear to show that chorea could be much relieved, and even rapidly cured, by bromide, but my own experience is that stated above.

*Local Clonic Spasms.*—I have given bromide of potassium in many cases of "spasmodic wry-neck," of "writer's cramp," and of "histrionic spasm," without observing that in any instance it afforded relief. In some there was temporary and trifling abatement of the spasm, but in all these the symptoms returned to their original intensity, even while the drug was continued.

*Persistent Tonic Spasm.*—Bromide of potassium has, so far as I have seen, been utterly useless when administered in cases of this description.

Looking back then to the uses of this drug in the treatment of spasmodic affections, it would appear, 1. That its efficacy is most marked when the malady is "paroxysmal;" 2. That its value is high in proportion as the disease approximates the type of convulsion known as "epileptic;" and 3. That when spasmodic movements are "habitual," be they either tonic or clonic, local or general—its remedial influence is, at best, extremely doubtful.

II. Passing now to another group of diseases, those marked by occasional disturbances, there are facts enough to prove that bromide of potassium is of great utility.

*Vertigo* sometimes occurs paroxysmally without the co-existence

of any obvious spasms—without any obscuration of consciousness, any failure of muscular power, or anything indicative of coarse organic lesion of the brain. In such cases, even after many months and even years of duration, I have known immediate and permanent relief from the use of bromide of potassium. Such cases are probably, though not obviously, related to attacks of "epilepsy," and they exhibit one feature of that disease in their amenability to the influence of this drug. It must, however, be remembered, that granting the epileptoid character of such affections, they are on that side of the malady which, as I have already stated, is the least influenced by the medicine we are considering.

*Headache*, of a paroxysmal character, and especially that which is accompanied by heat of head, and flushing of the face, is often relieved with much rapidity by the bromide.

*Hyperasthesia* of the mucous membrane of the fauces, œsophagus, air-passages, and urethra, would appear to be reduced by large doses of the bromide of potassium; but for facts illustrating this mode of action the reader is referred to the papers of M. Voisin in the *Bulletin Gén. de Thérapeutique*, and of M. Gubler, in *L'Union Médicale*. My own experience of its utility does not lead me to confirm the statements that have been made upon these points.

III. In the treatment of certain diseases affecting the cerebral centres in such manner as to prevent sleep, bromide of potassium has proved of great utility. Here it is necessary to give the drug in such large doses as thirty or forty grains, at the ordinary bed-time, and to repeat it frequently in smaller doses, of ten or fifteen grains, during the day.

In *Acute Mania*, and especially when there is much heat of head and redness of conjunctivæ, I have repeatedly seen refreshing sleep follow the administration of one full dose. The patient may not have recovered from his mania when he awakes, but he is calmer, and less exhausted; and after a few days of the treatment above suggested, is sometimes well. In others cases, however, I have found no good result from the exhibition of this medicine. In the wakefulness of *Melancholia*, bromide of potassium has, often, in my experience, proved worse than useless. It has apparently aggravated the feeling of distress. Not so, however, in all cases; I have known it to be eagerly sought for by the patient's friends as the one thing that seemed to give relief.

It holds a similarly doubtful position in regard to *Hypochondriasis*, having utterly failed to afford any relief in some cases, and having been highly prized by other patients. In both of these maladies it does but palliate symptoms. It must be remembered, however, that to relieve "symptoms" in the latter affection—hypochondriasis—is almost tantamount to cure.

*Acute Alcohlism*, with *insomnia*, is often beneficially treated by this medicine. It frequently induces sleep when opium has failed to do so; and there is no prejudicial effect produced by it upon the processes of secretion or exertion.

IV. There is yet another class of affections, to which I can make but a passing allusion here, viz., *disturbances of the vasomotor system* in other parts of the body than the head; and over these bromide of potassium exercises a most valuable control. When such derangements take place within the skull, their symptoms are those already described as epilepsy, epileptoid seizures, vertigo, and the like. But throughout the body, changes, analogous to those in the cerebral circulation, may occur; and the symptoms by which they display themselves differ with the regions affected. Such symptoms, are for example, sudden numbness, coldness, deadness, or pricking sensations in one or more limbs; sudden distressing, but indefinable feelings in the epigastrium, abdomen, or hypogastrium; or sensations akin to rigor, with much "anxiety," and palpitation or "fluttering" of the heart. In such cases it may be observed that the local circulation is interfered with; that, for example, the pulse in one arm becomes faltering, irregular in force and rythm, occasionally intermitting, while that in the other arm may remain unaltered, and the beat of the heart may maintain its normal character. These phenomena have now been observed by myself in a large number of cases, and I am quite sure that many of the symptoms mentioned, which have often been referred to some changes in the nervous centres—*i. e.*, to either the brain or spinal cord—are in reality due to the condition I have mentioned, viz. a derangement of the local circulation in consequence of a morbid state of the vaso-motor system of nerves. Nothing can far exceed the misery which some of these symptoms occasion; they often persist for years, or rather, occur paroxysmally for years, without finding any distinct or permanent relief from ordinary treatment of head, spine, and heart. They may, however, be diminished and entirely removed by the use of bromide of potassium, in such moderate doses as ten or five grains taken twice or three times daily.

V. As to the *mode of action* of bromide of potassium we are not yet in a position to speak with certainty. Of these negations, however, there is abundant proof—1st. That it does not lessen the force or frequency of the normal pulse. Upon this point I have made many scores of observations, and have failed to find any exception to the rule stated, when the dose has been such as to produce only therapeutic effects. 2dly. The syphygmographic tracing of the pulse is perfectly normal in patients who have taken bromide in large doses for many months; and I have

found it unchanged in the healthy adult by a dose of forty grains. 3dly. The temperature of the body has not under similar circumstances been reduced below the normal standard; but in some cases, where the medi cine has been administered to those in whom there was slight pyrexia, a diminution of the abnormal temperature has been observed. 4thly. That bromide of potassium does not, in therapeutic doses, affect notably any of the secretions. Occasionally the amount of urinary water appears to be augmented, but there is no constancy in this result. 5thly. That it does not interfere with the reproductive functions of either sex.

The facts that I have witnessed would lead me to infer that the specific action of bromide of potassium is exercised upon the system of vaso-motor nerves, and that it acts upon that system as a "sedative," —*i. e.*, that it reduces such morbid activity as would lead to the spasmodic narrowing of vessels, and the consequent induction of irregularity in the supply of blood. Contraction of the vessels forms by far the most important link in the chain of causes and effects in epilepsy and all allied diseases; it is obviously present in the class of cases to which I have referred in Section VI.; it is to be observed in those alluded to in Section III.; and it may be frequently recognized in those disturbances of sensations which were included in Section II. Moreover it is quite clear that vascular contraction in one locality may be accompanied by, even if it does not cause, fullness of vessels in other situations, and that the symptoms most obvious to the patient may be those dependent upon the latter change. Thus, heat of head, and oppressive headache, are often found to co-exist with shivering and cold extremities. In such cases bromide of potassium may relieve, by controlling spasm of the vessels, and thus restoring the equillibrium of health. All theories, however, on the action of this drug are, at present, but of trifling value compared with that of the facts which demonstrate its practical utility.

VI. *Bromism* is induced in very rare cases by moderate doses; in a large number of cases by the administration of the drug in great quantities. It symptoms are—acne on the face, redness of the palate, epigastric heat, œdema of the mucous membrane of the mouth, and salivation, or bronchial catarrh; heaviness, drowsiness, and confusion of ideas, with irritability of temper and weakness of muscles; there is occasionally an ataxic gait like that of commencing alcoholism. All the symptoms speedily disappear on the discontinuance of the drug.

Enough has been said to show that in the introduction of this comparatively new therapeutic agent into our Pharmacopœia, the profession and the public have received a great boon, inasmuch as they have met with a medicine, which, while absolutely devoid of all danger in its exhi-

bition, yet exerts a most beneficial control over a large class of diseases confessedly among the most obscure and most obstinate of the ills to which humanity is subject.

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## ON POISONING BY NITRATE OF BARYTA.

By Charles Meymott Tidy, M.B., M S. Joint Lecturer on Chemistry at the London Hospital.

I was requested by Charles C. Lewis, Esq., coroner for Essex, to examine and make an analysis of the stomach of a man who had died under the following circumstances:—

W. H., æt. 46, single, a carman in the employ of the Messrs. Volckman, living at Stratford, had always enjoyed good health, with the exception of occasional but slight attacks of rheumatism, which however had never been sufficiently severe to keep him from his work. Having complained of a slight pain in the shoulder, one of his fellow-workman recommended him to take some sulphur, and on the following day (Saturday), when his landlady was going into the village to make sundry purchases, he requested her to bring him in a quarter of a pound of sulphur. She did so, brought it back, and gave it to deceased. He then asked her to mix it for him in a little water. She thinks she mixed about a quarter of the powder with water in a mug. As he had complained during the day of a slight attack of diarrhœa, she recommended him to take the dose in the morning (Sunday), and not over-night as at first he had intended. About half-past six in the morning his landlady heard him cry out, "I am poisoned." She at once run up to him and replied, "Nonsense, you cannot be poisoned with flowers of sulphur;" whereupon he opened his mouth and showed her it was covered with blisters. Mr. Kennedy, of Stratford, was sent for between nine and ten o'clock on the Sunday morning, and upon looking at the sulphur detected something of a chrystalline nature in it. The man was then in a state of collapse, and died about twenty minutes past twelve, that is about six hours and a half after he had taken the mixture. There was a partial loss of voice, coldness in the extremities, intense pain in the bowels, a burning pain in the throat partial convulsions, with violent vomiting and purging.

On Monday evening Mr. Kennedy made a *post-mortem* examination, and reported as follows:—"Body well nourished, muscular rigidity well marked. The membranes of the brain were congested, the vessels being fully extended with dark colored blood. The left pleura was adherent, the left lung being very much congested, the right slightly so, especially at the edges. The heart was large and flabby, both sides full of black

blood. The duodenum was highly congested; there were several dark congested spots about the rectum."

I received the stomach from the constable, and upon opening it noticed that in some parts there was merely a slightly increased vascularity, the redness in other parts being of a very much deeper character. Ramifying over its entire surface I observed vessels filled with dark blood, which were more marked and in greater number near the pyloric end. This general florid appearance extended to that portion of the duodenum which I received attached to the stomach. The stomach contained about four and a half ounces of a reddish fluid, which had a neutral reaction. I also received the small intestines, which throughout their whole length presented a slightly, though very slightly congested appearance. The rectum was highly congested. The mug was also forwarded to me from which deceased had taken the mixture, containing some powder at the bottom; and likewise the packet from which the landlady had taken the powder she had mixed.

On examining the powder I found it had very much the appearance of ordinary sulphur, save being somewhat lighter in appearance. On igniting a small quantity on a piece of charcoal before the blow-pipe, it deflagrated most brilliantly, giving a distinctly green light. I then made an analysis of it, and found in every 100 grains 51.52 of barytic nitrate. There was also potassic chlorate present with sulphur in the powder. Upon examining the stomach for both mineral and organic poisons, I detected distinct traces of barytic nitrate, and also the potassic chlorate. Of course there was no doubt left in my mind that the man had taken the powder, and that death had resulted from the action of the nitrate of baryta.

There was some reason for suspicion how this baryta became mixed with sulphur, and I therefore requested that a sample should be sent me of the sulphur from the drawer of the chemist of whom it was said to have been purchased. Upon examining this I found it to contain 6·76 per cent. of barytic nitrate. I then examined fifteen different samples of sublimed sulphur bought from fifteen different chemists' shops, all of which, however, I found to be perfectly pure. Indeed, it would scarcely be worth while adulterating flowers of sulphur. How then, did the baryta get into the sulphur? It was plain that the mistake had originated in the chemist's shop, but at first it was not easy to account for the difference between the quantity of baryta found in the powder given deceased and that in the chemist's drawer. The chemist (who, by-the-bye, was a woman) asserted that she had never had any baryta in her shop, but the after evidence proved this to be a mistake on her part. The expla-

nation was gathered from a late assistant, who knew of the presence of a packet of green fire in the shop, as he had sold some only a short time previously. There was no doubt, therefore, that this had been mistaken and sold by this lady chemist for sulphur, and that she threw the little remaining behind in the packet over and above the quarter of a pound that she was serving, into the sulpher drawer. And this fully explained the difference between the quantity of barytic nitrate in the two samples.

I was unable to find upon record a single case of poisoning by nitrate of baryta, nor yet of any experiments that had been made with it to determine the quantity that will destroy life. I made therefore the following experiments at the special request of the coroner. I must here acknowledge the assistance kindly rendered me by Dr. W. B. Woodman in watching the animals and assisting me in the *post-mortems*.

Experiment 1.—August 10th.—Gave a rabbit ten grains of nitrate of baryta as a powder, mixed with a little sugar. It was found dead in less than an hour.

*Post-mortem*, August 13th.—Rigor mortis persistent. Fur very rough. Pupils widely dilated. Brain and membranes congested. Lungs congested and very rotten. Heart—Both sides full of black blood. Pharynx natural. Liver: very rotten; in some parts deeply congested. Kidneys: slightly congested. Stomach full of food; broke down at once with the least touch; florid appearance over the whole inner surface. Duodenum slightly congested. Small intestines not congested, quite empty, and appeared transparent. Rectum deeply congested. Bladder empty. I found a trace of the poison in the liver, and in the stomach in considerable quantity.

Experiment 2.—August 10th, 7.30 p.m.—Gave a rabbit five grains of nitrate of baryta in the form of a bolus, with flour and sugar.

9.30 p.m.—Found it lying on its side slightly convulsed. Pupils widely dilated. Fur rough. Has been purged violently. Respiration 80, shallow and laboured. Aortic pulse 120, but hardly to be felt. Almost dead.

August 11th, 11.20 a.m.—Only just alive; insensible, and cannot be roused.

7 p.m.—Cardiac pulsations 160. Respiration 120. All but dead. Takes no notice, but apparently sees and hears. Is getting cold. Died at 10 p.m.

*Post-mortem*, August 13th.—Fur rough. Pupils widely dilated. Buttocks stained with fæces. A little frothy mucus about the mouth. Brain apparently normal. Heart.—Both sides contained black clots; the right side being most distended. A little staining of the endocardium. Lungs.

—The lower lobes deeply congested, in fact, in the stage of red hepatization, almost passing into apoplexy. Stomach so softened as to tear with the least touch; distended with greenish food, consisting apparently of bran and corn. Second stomach nothing unusual. Duodenum somewhat reddened as to its mucous membrane. Rectum much congested. The remaining intestines apparently normal, containing a little milky fluid and a little fæcal matter. Urinary bladder full. Liver soft and congested. Kidneys apparently normal. I examined the urine and the liver for the poison, but was not able to detect any. Distinct traces, however, were to be found in the stomach.

Experiment 3.—Gave a small terrier (August 17th, 4.30 p.m.) thirty grains of nitrate of baryta on meat.

6.45 p.m.—Violent purging and vomiting. Insensible and appears dying. Convulsive twitchings.

8.15 p.m.—Died, after severe convulsions.

10.15 p.m.—Rigor mortis strong. Some thin light brown fæcal matter about the anus.

*Post-mortem*, August 18th, 12.30 p.m.—Rigor mortis persists. Pupils widely dilated. Brain normal. Thorax.—Both sides of the heart contain black blood, the right side in greater quantity. Lungs considerably congested. Abdomen.—Stomach reddened, soft and distended with food. Duodenum slightly congested, which congestion did not extend to the other parts of the small intestines. The rectum was considerably inflamed. The kidneys were slightly congested. The liver was considerably congested and softened. I found the nitrate of baryta both in the stomach and in the liver.

Experiment 4.—August 13th, 5.30 p.m.—Gave a small terrier ten grains of nitrate of baryta on a peace af meat.

9 p.m.—Very lively.

August 14th, 11.45 a.m.—Very quiet. Does not take much notice. Has been considerably purged.

9.30 p.m—Heart beats 160. Has passed a formed colorless stool.

August 15th, 11.30 a.m.—Seems much worse. Cardiac beats 128. Slightly convulsed. There has been considerable vomiting and purging. Respiration unequal and irregular.

9.35 p.m.—All but dead. Getting stiff. Hardly seems to feel. Reflex actions almost gone. Has dragged itself a foot during the last hour.

August 16th, 11 a.m.—Considerably better, but very shakey on his legs.

8.30 p.m.—Very little power in hind legs, but seems gaining power in the front ones. Fell on attempting to jump down two feet.

August 17th, 1 p.m.—Hungry. Has been violently purged. Looks thin, shabby, and spiritless. Has passed a great deal of urine.

August 19th.—Has quite recovered.

Experiment 5.—August 13th, 5.39 p.m.—Gave a large skye terrier twenty grains of nitrate of baryta on meat.

6.30 p.m.—Looks dull, and is dribbling from the mouth.

9 p.m.—Slight vomiting and purging, but otherwise seems tolerably well.

11 p.m.—Very quiet. Has slight convulsions.

August 14th, 11.45 a.m.—Restless, but appears recovering.

August 15th.—Fast getting well.

Experiment 6.—August 17th, 11.45 a.m.—Gave a large dog thirty grains of nitrate of baryta on meat.

August 18th, 9.35 a.m.—Convulsions; cannot stand. Violent purging. Fur rough. Looks very stupid and shakey on the legs.

12.30 p.m.—Seems to have quite revived.

August 19th.—Has eaten a good meal and is much better. Recovered in a few days.

Experiment 7.—August 17th, 4.30 p.m.—Gave a large dog sixty grains on meat and in powder.

6.45 p.m.—Able to stand, but seems tottering and very thirsty.

12 p.m.—Slightly convulsed. Looks dull and heavy.

August 18th, 10 a.m.—Better.

12.30 p.m.—Has passed a great deal of water and been much purged.

3 p.m.—Still passing a great deal of water. Slight convulsions, and paralysis of back legs. Takes but very little notice of anything going on about him.

8 p.m.—No use in his hind legs. Heart beats 100.

August 19th.—Is considerably better; gradually recovering use of his legs. Seems hungry and drinks enormously. The dog was quite well and running about after two days.

Experiment 8.—August 24th, 2.40 p.m.—Gave a big dog 120 grains of the nitrate on meat. Within an hour there were violent convulsions, with excessive purging and vomiting. Apparently was in considerable pain. Drinks everything put in its way, and passes an enormous quantity of urine. Died at 5.20 p.m.

*Post-mortem*, August 25th, 1.30 p.m.—Rigor mortis persistent. Brain normal. Thorax.—Æsophagus natural. Lungs deeply congested. Clots in both sides of the heart. Abdomen.—Stomach the seat of acute inflammation, spreading over its entire surface. No ulceration or perforation, but there were black spots of extravasated blood distinctly visible on the

mucous coat. The stomach contained some brown grumous matters. The inflammation extended to the duodenum, and affected more or less the whole length of the alimentary canal, but was most of all conspicuous in the rectum. The bladder was empty. The liver was deeply congested and the kidneys slightly so. I was able to detect the poison in the stomach, liver, brain and muscles.

I append the following tabular statement of the results of our experiments.

| Experiment. | Animal. | Dose. | |
|---|---|---|---|
| 1. | Rabbit. | 10 grs. | Died in less than one hour. |
| 2. | Do. | 5 „ | Died in 27 hours. |
| 3. | Small Terrier | 30 „ | Died in 3¾ hours. |
| 4. | Do. | 10 „ | Recovered in five days. |
| 5. | Large Dog | 20 „ | Recovered in two days. |
| 6. | Do. | 60 „ | Recovered in two days. |
| 7. | Do. | 120 „ | Died in 2½ hours. |

—*Medical Press and Circular.*

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## OULACHAN OIL AS A SUBSTITUTE FOR COD OIL

The distinguished naturalist Robert Brown, has recently contributed to the London *Pharmaceutical Journal*, a paper relating to a fish found in great abundance in the waters of the north-west coast, which furnishes an oil reported to be equal to the cod liver oil for medicinal effect, and devoid of its offensive qualities. If the estimate placed on it by that intelligent writer should be confirmed, the discovery will not only prove useful to humanity, but valuable to the American settlers of the Pacific Coast in a mercantile point of view. It belongs to the Salmon family, and is the *Osmerus pacificus* of authors. The subject is of sufficient importance to warrant us in transferring to the columns of the Journal the main portions of Mr. Brown's article.

The scientific description is as follows: Head, subconical and pointed. Mouth large; posterior extremity of maxillary bone extending to a vertical line drawn posteriorly to the orbit. Eye rather small. Adipose fin placed opposite the posterior portion of the anal, which is rather elongated. The insertion of the ventral fins is situated considerably in advance of the anterior margin of the dorsal. Scales moderate, subelliptical. Dorsal region greyish-olive; middle of flank yellowish-orange, dotted with black; belly yellowish, unicolor; upper sides and surface of head greyish, fins unicolor.

The *Oulachan* or *Eulachon*, is a small delicate-looking fish, about the size of a smelt, and not unlike it, semipellucid, and with fine scales. On or about the twenty-fourth of March—at nearly the same time each year—it enters the northern rivers, and the southern ones a little later. It was once abundant in the Columbia, but that stream being now disturbed by the traffic of steamers, it is only now in exceptional years that they are caught there in any quantity. In Fraser River, and in most of the rivers on the coast of British Columbia, they are still found at that season (March) in greater or smaller quantities, but it is in the Naas River, falling into the Pacific in lat. 54° 40′ N., that the Eulachon is found in the greatest quantities, and it is to its capture in that stream that these notes chiefly relate. The fish comes up from the sea into the fresh water for the purpose of spawning, but, unlike most of its allies—the salmon proper—on that coast, returns to the sea again, and is not seen until the following year. During that season they swarm in inconceivable shoals, and I can well believe that the Indians indulge in no hyperbole when I have heard them say that their canoes have been lifted in the water by the countless swarms of fishes. Their arrival is at once heralded by flocks of *Laridæ* and other marine birds swooping down to seize upon them, and during the whole of the fishing season the screams of the gulls vie with the shouts of the Indian fishers.

By long custom made and provided for, northern tribes have a vested right of fishing the Eulachon on the banks of the Naas, and certain other equally numerous and powerful tribes are prohibited from enjoying this privilege, and are compelled to buy their oil from their more fortunate neighbours. Accordingly some days before the expected advent of the fish in the river, the Indians assemble from far and near to the number of several thousands, in order that they may take up their proper camping grounds on the banks. Men, women and children come,—it is the herring-fishing of the Indians, and all can be employed. A general holiday prevails, and tribes vie with tribes, families with families, in dress and feasting, and show their joyousness in a thousand different ways. Families who have not met for twelve months now meet, and the Eulachon, or *Yghuh* (almost unspellable and certainly unpronouncable) fishing is looked forward to from one year's end to the other as a time for gossiping, courting, and general merry-making. In a few days, however, the fish begin to make their appearance, and now all are on the alert, and all idling is at an end. The first shoal, as I have said, comes into the river, from the 24th to the 27th of March, and stays three days. These are so exceeding fat that they cannot be cooked in a pan, for they will "blase up" like a mass of oil. Out of these the best portion of the

oil is made. In about three days these begin to disappear, and are succeded by a second shoal, not so large or so fat, and these again in a day or two by the third and last shoal, which is poorer and dried for winter use, being sufficiently free from oil to permit of this. So fat are these last even, that if lighted during the dry state they will burn like a candle, and are often used as such by the natives; hence they are sometimes called the "candle-fish." The river during the time of fishing presents a busy scene covered with canoes sweeping the fish in, while others filled are landing and being unloaded by the women and children, again wildly to rush back to share in the harvest. Ashore the scene is not less vivid. Fires are blazing and pots boiling, and boxes being filled with the oil, while in and around and over all, prevails an amount of unctiousness indescribable,—a greasiness of which it is impossible to conjure up the faintest idea! The fish are chiefly taken by nets (in the Naas) but myriads get washed ashore and are caught by the old women and children and kept as their perquisite. In Fraser River they are principally captured by means of a flattened cedar pole, the edges of which for a couple of feet or so near the end being set with sharp teeth or nails, which act like so many spear-points. The Indian, standing in his canoe, sweeps this through the water, and so numerous are they that there is no fear but that a number will be impaled on the points. These are swept behind him into the canoe as a mower uses a scythe, until the canoe is full. Herrings and shoals of all other small fishes are caught likewise in this ingenious mode. Besides those kept for drying or from which oil is made, vast quantities are used in the fresh state for food, and the sudden arrival of fish, occurring generally just at a time when the Indian's winter stores are nearly finished and they are rather pressed for food, the plethora often proves fatal by producing surfeit.

The oil is obtained by putting the fish into water in boxes—generally hollowed out of a solid block of cedar (*Thuga gigantea*, Nutt., T. *Menziesii*, Dougl.,) or so closely made as to be water-tight—and then throwing in red hot stones. This ingenious method of boiling is practised by all the Indians on the north-west coast of America. The oil is then skimmed off the surface and set aside to cool. The oil is never made by suspending iron vessels (after the more familiar manner of the whites) over the fire, for in that case the fishes would be destroyed, and it would be difficult to separate the broken fragments from the oil. The quality, however, greatly depends upon the care employed, and the amount of heat used to extract the oil from the fatty tissues of the fish. An inferior description is also made by squeezing the fishes out of which the finer oil has already been extracted in the method described, in a cloth against

a board. Properly prepared, the oil, at a temperature of 60° Fahr., is amber-colored and liquid. At a lower temperature it becomes thick and opaque, increasing in solidity according to the degree of cold; in this state it is whitish in color and resembles soft lard. The northern tribes keep it in boxes of their own making, but the more southern Indians—such as the Quakwolths, at Fort Rupert (lat. 50° 42′ 36″ N., long 127° 25′ 07″ W.)—preserve it in bottles, made out of the stem of the giant seaweed, *Macrocystis pyrifera*, Ag., squeezing out a little when required, as a painter does his colors out of the tinfoil tubes.

The fish, cooked fresh, is most delicious, and, when salted, is also a very palatable article of food, and held in much request among the Hudson Bay Company's traders and other old residents on the coast. The Indians dry vast numbers for winter use, and carry them with them in strings, during their annual migrations south, and for sale to other tribes who come to purchase them as well as the oil. The *Tsimpsheans* say that the Naas river clothes them and the Skeena river feeds them, because the *Hydahs*, from the Queen Charlotte Islands, and other tribes who are prohibited from fishing for the *Oulachan* in the Naas, come and purchase the oil from them, paying blankets for it, while the salmon of the *Skeena* supplies them with abundant supplies of food. I cannot but think that these fish would form a most valuable and lucrative article of commerce either in the salt or dried condition, and that in either of these forms, or preserved in ice, or in their own or olive oil, like sardines, they would command a ready market, especially in the Roman Catholic countries along the Pacific coast, in China, and even in Europe and the Atlantic states of America. A small joint stock company was indeed formed in Victoria, in 1864, for that purpose, but failed for want of capital and ignorance of the habits of the fish. Before they could get their affairs settled to start north, the season was past, and nothing further was ever done. The Indians, no doubt, declare that no white man shall ever cast a net into the Naas, but independently of this futile threat, supplies could be purchased from the Indians to almost any amount, and, if sufficient inducement were held out to them, the present catch could very easily be increased tenfold.

The oil is of even greater value than the fish itself, as usually seen in the opaque lard-like condition, and after having undergone no other preparation than the rough *trying out* just described, its taste is not unpleasant, and the odour by no means disagreeable. Even in this condition it has been used by the whites for culinary purposes, and the Indians use it in all their meals, much after the same way as we do butter, using it also as a sauce to their dried salmon. So fond are they of it, and so

essential to their health is it (as I shall presently refer to) that the Hydahs and other tribes, as I have already said, come over to purchase it eagerly, and the Hydahs, Stekins, Tsimpsheans, and other northern tribes who winter in Victoria and Puget Sound, will come on board the Metlakathlah mission schooner to purchase it. They complain of the price, but still cannot do without it. An old Tsimpshean once said to me, "I can buy beef and bread cheaper but my heart never feels good until I have got this grease. There are just two sweet things in food—*rum* and oulachan oil!" However much we may be inclined, from a civilized stand-point of view, to doubt the soundness of this summation of a lifetime's experience, there is no doubt that this oil, both in an edible and *medicinal* light, is of the utmost value. It is the latter property which the readers of the present article will be most interested in, and which I desire most earnestly to press upon their attention, Its effects on phthisical patients are most wonderful, and, from the moist climate of the northern portions of the Pacific Coast, the natives are very subject to phthisis, hæmoptysis, and other forms of pulmonary disease. As it is, many die annually of these complaints, and I believe that I only speak the opinion of all who know these people, or who have thought over the subject, that were it not for this Oulachan oil, these northern tribes, once so powerful, and still so courageous, intelligent, and physically fine, would be decimated, and already enfeebled in constitution through vices learned from the whites, their extermination would be *un fait accompli.* It relieves violent coughs in a most remarkable manner, and equally conduces to the accumulation of flesh. In a word, it has all the properties of cod-liver oil and other fish oils in an intensified degree, without their nauseous taste—a taste which is found even in the best and most carefully prepared oils, and prohibits many availing themselves of their valuable qualities. I have known delicate ladies who would have vomited at the smell of the ordinary cod-liver oil, put the bottle of oulachan oil (slightly heated, in order to liquify it) to their mouths, and drink it without the smallest nausea! If the oil thus rudely prepared by the natives be so little unpalatable, I doubt not but that if it underwent the usual refining process of the chemist, it might be produced perfectly tasteless. The old fur traders on the coast everywhere use it in pulmonary diseases, and even send supplies of it into the interior, for the use of friends residing there. It is looked upon almost as a specific, and the few boxes which the Hudson Bay Company's trading vessel brings down on her annual spring voyage (not as an article of commerce, but for the accommodation of friends) are generally bespoke long before. The medical officers of the Company have long preferred prescribing it to cod-liver oil, both in their own fam-

ilies and in general practice. One of these gentlemen, whose great intelligence and long experience entitle his opinions to every respect, entertains very similar views to those I have advocated, and I have, moreover, heard him attribute the health and even the existence of the Indians during their exposed life in a *hyperpluviose* climate like that of Fort Simpson and north to Sitka, to the use of oulachan oil. In the course of my journeys into the interior of Oregon and elsewhere, I had occasion to recommend and procure some for friends troubled with phthisical complaints, and in every instance I have heard its merits extolled in the highest degree.—*Pacific Medical and Surgical Journal.*

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## ATOMIZED MEDICATION FOR ASTHMA.

By M. F. Bassett, M. D., of Quincy, Ill.

Some experiments which I have recently made in the treatment of asthma, by means of the atomizer and the inhalation of medicated spray, have been so satisfactory to me and my patients, that I feel justified in asking the attention of the profession to this plan of treatment.

The hand atomizer of any manufacture, that throws a continuous and copious jet of spray, answers every purpose, and is more convenient in general practice than the more complicated and cumbersome "nephogene." With these instruments, as is generally known, any liquid or medicinal substance in solution, can be applied directly to all parts of the air passages or respiratory organs. Various medical agents by this method are appropriate to asthma, but I have gained the best results from a combination of antispasmodics and expectorants. In the four cases which I subjoin, the following formula was employed:

℞ Ext. hyosciami, fl.
" lobeliæ, fl. aa f. ʒ j.
Aquæ dest. f. ℥ j. M.

*Case* 1*st.* A merchant, æt 40, has suffered from childhood more or less—the past six years a great deal, seldom being able to lie in bed all night, especially in autumn. Was called to him at night of August 15th, '68. Found him in an unusually severe paroxysm and nearly unconscious from the effects of chloroform inhalation, having used four ounces of this anesthetic during the day and evening, with only slight and transient relief. The spray gave him perceptible relief in ten minutes. Leaving the atomizer with directions to use it for four or five minutes at a time every hour, or oftener if necessary, I returned next day to find my patient breathing easily, looking comfortable and feeling greatly refreshed from eight hours' sleep that he had enjoyed in the morning. The spray

was continued at intervals for the next three days and no other medication employed, except a cathartic at my second visit. No more sleep was lost nor distress endured, and when I discontinued the treatment he informed me that the last three days and nights had been passed more comfortably than the same length of time during the last six years Have not seen the case or had any further report since.

*Case* 2*nd.* A young man of about 25 years of age came into my office August 20th, laboring under so severe an attack that he had walked three blocks with the greatest difficulty and could not speak for several moments. His respiration, cyanosed and distressed expression, gave a correct knowledge of his affection, and as soon as he was seated, without waiting for him to tell his story, I commenced to give him the spray. In less time than it requires to write it, he began to inspire easier and in half an hour was breathing and talking with ease. He informed me that he was a stranger, bound west to find a place where he could be exempt from the suffering he had endured on the sea shore from his childhood—that he had been detained here for a week on account of the present attack and that the night previous one of our most experienced medical men had been with him for several hours making fruitless efforts to relieve him. He came to my office morning and evening for several days and used the spray for an hour at intervals, suffering but little by night or day and then went on his way rejoicing.

*Case* 3*rd.* An old gentleman about 60 years of age, whom I have known as an asthmatic for several years, living on a farm three miles from town, despatched a messenger for me in haste late in the evening of August 24th. I found him in a frightful paroxysm, with all the symptoms of extreme distress and suffering. As speedily as possible the spray was administered, and in half an hour he fell into quite a and refreshing sleep, for the first time in nearly a week. I left him a chologogue cathartic with directions for him to take it when he should awake, also the atomizer and directions for its use. The next evening found him comfortable with the gratifying report that he had slept and rested quite comfortably, and had had no distressing paroxysm since the previous visit. Prescribed five grains of quinine to be taken every morning, and half a grain of podophyllin every evening, and to continue the spray at intervals for four days and then to report at my office. At the appointed time a neighbor returned the atomizer with the report that the old gentleman was perfectly relieved and at work as usual. I have seen the patient several times since, and he informs me he has been entirely free from asthma ever since, now nearly three months, and that he sleeps comfortably upon a feather bed.

*Case 4th.* A prominent citizen of this place, about 50 years of age, who has suffered more from asthma and obtained less benefit from the usual treatment, for the past eight years that I have been acquainted with him than any other asthmatic I ever knew, called on me Sept. 17th on account of an unusually severe paroxysm. The spray relieved him promptly, and instead of being confined to the house for several days as always heretofore with similar attacks, the next day he was able to go to his office and attend to ordinary business. He used the spray for several days occasionally, and experienced great benefit from it, and says nothing else has ever given him such prompt and decided relief, and thinks it has permanently improved his condition, as he has since been exempt from a severe paroxysm. He formerly lived in one of the Eastern States where he had suffered so much from this complaint that he came West hoping to find relief from change of climate. The change benefited him for a time but not permanently. Since residing here, in addition to your correspondent, several of our most experienced physicians have exhausted their skill upon him in vain. He smoked arsenic and saltpetre, inhaled chloroform and ether to an alarming extent, taken anodynes and stimulants, had hypodermic injections in great number and varieties, used every nostrum and measure ever conceived of for this malady, and never found even a reliable palliative till the spray was resorted to. I believe that a few months hence this case will afford still stronger evidence of the efficiency of the new plan of treatment.

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## Surgery.

### THE REMOVAL OF CANCER BY CAUSTIC ARROWS AND CARBOLIC ACID.

By J. R. Wolfe, M.D., F.R.C.S. Edin., Ophthalmic Surgeon to the Aberdeen Royal Infirmary.

I wish to bring before the Association two cases of cancer treated by caustic arrows and carbolic acid, both of which terminated favorably.

Case I. *Epithelial Cancer.*—J. B., aged 51, farm servant, applied for advice at the Royal Infirmary, Aberdeen, in May, 1867, on account of a tumor in the inner canthus of the left eye. The tumor was about the size of a large walnut, rounded in form, hard, inelastic, and nodulated to the touch; immoveable, being firmly attached to, and involving part of both eyelids; affected every now and then with attacks of lancinating pain. He stated that it began about nine years ago, in the form

of a small wart at the inner angle; it remained nearly stationary for a considerable time, but some months ago it had begun to enlarge, and continued to progress rapidly.

On being told that it was malignant, and would require an operation for its removal, he left the hospital, and did not again present himself till July 3rd, at which time the tumour had begun to break up on the surface by ulceration; being covered with a crust, and having an ichorous discharge, of a slightly offensive smell, spreading and infiltrating the subintegumental tissue. Examined with the microscope, it presented the ordinary characters of epithelial cancer. The awkward situation in which it was placed rendering it difficult of removal by the knife, without producing cicatrices which would have given rise to considerable deformity of the eyelids, I had recourse to the following procedure.

Five openings were made with a broad lance, into which caustic arrows were inserted; one of these was in the centre of the tumor; the other four were in the healthy skin round its margin; and the neighboring parts were protected by a patch of leather, having an opening cut in its centre of sufficient size to embrace the tumor. The whole was covered with a compress of dry lint and bandage. As the patient complained of no pain, nor any irritation, he was allowed to move about the ward as usual.

On the third day the whole tumor came away, leaving a grey-colored slough, which was detached in the course of twenty-four hours by the use of linseed meal poultices. The surface now exposed was clean, and presented irregular elevations, which bled very readily. The gap left was so deep as to expose freely the inner wall of the orbit as far back as the middle of the eyeball. The surface was now painted with strong carbolic acid, and the whole covered by wadding dipped in glycerine. This treatment was continued for three days; by which time the bleeding elevation disappeared, and the whole presented an uniform granulating surface. It was then covered with carbolised wadding dipped in glycerine; the dressing being changed every second day, and the wound washed with a weak solution of carbolic acid. Under this treatment the gap filled up rapidly; and in a fortnight it was entirely healed.

In August I exhibited the case at the meeting of the North of Scotland Medical Association; when the skin about the inner canthus and eyelids presented its natural appearance, and scarcely a trace of cicatric remained to show that loss of substance of such an extent had occurred.

I had an opportunity, quite recently, of examing the patient, and found the cure complete. The only traces (and these only to be observed on minute inspection) are: a slight elevation of the inner angle, as if the

periosteum there were thickened, and the obliteration of the tear duct, which, however, does not give rise to any inconvenience.

Case II. *Cancerous Cyst.*—E. A., aged 68, domestic servant was admitted into the Royal Infirmary, October 12th, affected with a hard tumor of the left inner side of the lower eyelid and cheek, measuring two inches and one-eight in its largest diameter; of an oval shape, irregular and nodulated on the surface, and presenting the appearance of small abnormal vessels ramifying on its cutaneous surface, which was completely adhering. On puncturing it, there escaped a quantity of bloody serum and air-globules, which evacuation, however, did not diminish the size and hardness of the tumor. This fluid, when examined under the microscope, presented a mixture of cells and granules, but of so undecided a character as not to make it clear whether these were cancerous or merely the products of an inflamed cyst; but the bulk of the tumor, etc., showed unmistakable characters of malignancy. The tumor was removed by caustic arrows, as in the last case, and dressed with carbolic acid. The patient was discharged in eighteen days, scarcely any appreciable cicatrix being left, and still continues well.

Remarks.—The advantage of this mode of treatment appears, as far as two cases prove anything, to be the following:

1. It is painless. Patients walked about the wards as if nothing had been done, and complained of no feeling of pain or discomfort whatever.

2. The tumour is completely eradicated; and, under the action of the antiseptic, which acts in the first instance as a caustic to the diseased tissue, healthy granulations are produced, which completely fill the gap, and leave little or no trace of a cicatrix.

This method appears exceedingly valuable for removing tumors from regions were no skin can be obtained from the neighborhood; and is also applicable to erectile tumors, nævi, cancer of the breast, etc., occurring in patients, places, or seasons of the year, when the use of the knife is to be dreaded.

On my mentioning the result of my cases to Professor Gosselin, he told me that for the last few years he had rarely used the knife for the removal of cancer of the breast in the Hopital la Pitié, but regularly resorts to the use of the caustic arrows. The result is, that he does not now meet with cases of erysipelas, which used to be very common in his wards. He showed me several cases under treatment; but they were not sufficiently far advanced to enable me to judge of the appearance of the cicatrices, or to decide how much of the beautiful result above detailed is due to the carbolic acid, and how much to the arrows: in short to determine whether the same result might not be obtained by the use of the knife and carbolic acid.

The arrows employed I obtained from the Pharmacien of Hôtel-Dieu, Paris, who prepares them by dissolving chloride of zinc in a little water, making a saturated solution, and mixing it with sufficient starch to make a stiff paste, which is rolled into a thin cake, cut into shape, and dried at 212 deg. Fahr. Although elsewhere I have claimed priority in the use in this country of carbolic acid as a dressing for wounds, yet I by no means wish to undervalue the great service rendered by Professor Lister to surgery in the systematic employment of it. Having seen its employment in Professor Lister's wards in the Glasgow Infirmary, I may be allowed to bear testimony to the skill, care, and originality, with which his experiments have been carried out.

Although not strictly belonging to the subject of this section, I may be permitted briefly to draw attention to a point alluded to in Case I. I have there stated that the obliteration of the lachrymal passage gave rise to no material inconvenience; and, adopting the ordinarily received doctrine that the tears are secreted by the lachrymal gland and removed by the lachrymal canals, sac, etc., one naturally asks why, in such a case, troublesome epiphora did not follow? But this view of the functions of these parts has been shown to be erroneous by repeated experiments and clinical observations. Magendi and Martini removed the lachrymal gland in animals, but found that the secretion of tears still continued. Cases where, in man, the lachrymal gland has been removed on account of disease, have been reported by Daniel O'Brien, Sir W. Lawrence, Graefe, and Paul Bernard; in all of which the conjunctiva remained moist, and in some even tears were secreted in such quantity, under irritation as to flow down the cheek. It would appear, therefore, that the ordinary secretion is derived from the conjunctiva, and is not formed in larger quantity than can be got rid of by evaporation; while the lachrymal gland, like the salivary gland, to which it approaches in structure, secrets only periodically, and is intended to afford a large supply of fluid under the influence of irritation, when required to rid the ball of foreign bodies, as in cases of mental excitement. Hence, xerosis is not the result of the removal of the lachrymal gland, but is produced when the conjunctiva is extensively destroyed by granulation, removal of the eyelid, and the like.

Experiments.—In 1863, I repeated in my class the experiments of Magendi, Martini, and Donders, by removing in the right eyes of two rabbits, both the lachrymal gland and the gland of Harder, connected with the membrana nictitans. In both cases, the right conjunctiva remained as moist as the left, and, when dried by everting the eyelids and applying a dried cloth, became again moist in a few seconds. The ap-

plication or irritants, such as ammonia, to the nostrils, produced precisely the same effect on the eye operated on as on the sound eye.

On two other rabbits I removed part of both eyelids and of the membrana nictitans; and, in both, although the eye was protected, in the one by drawing the ear over it and securing it in that position, and in the other by a screen of wire-gauze, the cornea became opaque in the part thus left unprotected.

These experiments I have recently repeated, and obtained the same result. My special reason for touching on this subject is, the recent publication Mr. Z. Laurence, of some papers in which he recommends the extirpation of the lachrymal gland for the radical cure of obstinate epiphora. The results of these experiments show, that the performance of such a formidable operation for that purpose, would, in all probability prove of little value; and, therefore, I take the liberty of suggesting the propriety of making further investigations on this point before adopting such a procedure.—*British Medical Journal* 1868.

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## OPIUM IN WOUNDS OF THE ABDOMEN.

By Charles C. Lee, M.D., New York.

I am induced to offer the following record as an additional testimony to the great value of opium in the treatment of penetrating wounds of the abdomen. The case occurred during my service as House Surgeon to the Pennsylvania Hospital in Philadelphia.

*Case.*—Andrew S., a large muscular man, aged thirty-three, was admitted to the Hospital on the evening of October 22nd. In a fight with another man he had received two stabs—one in the back, the other in the abdomen. The former was an incised wound below the left scapula, three inches in length, extending through the skin into the *latissimus dorsi*, and filled with clotted blood; this was at once turned out, and the wound closed by sutures and compresses. The other wound was more serious. It extended a distance of five inches along the epigastric and right hypochondric regions, from an inch above the umbilicus to the edges of the false ribs. Through this opening protruded the *gastro-hepatic omentum*, a knuckle of the *duodenum*, *the entire gall bladder* and about *two inches of the right lobe of the liver*. Hemorrhage was profuse from the small cutaneous arteries, but none of the intestinal vessels were wounded. The viscera were carefully examined, and, as soon as it was ascertained that none of them were injured, they were replaced in the reverse order to that in which they protruded. The

wound was cleansed, and brought together by the interrupted lead wire suture, over which were placed a pad of dry lint, compresses, and a firm circular bandage. There was little or no shock, and, although the amount of hemorrhage must have been large, the man's pulse was full and slow—beating only seventy to the minute. Three quarters of a grain of sulphate of morphia were given, perfect rest on his back enjoined and in an hour the patient was sleeping.

October 23rd.—As no bleeding occurred during the night, and the wound was easy, the bandage was not removed, nor was the back examined. The morphia was continued in one half-grain doses every four hours, and the patient was confined to the most rigid diet—barley water, rice water, and thin gruel.

October 24th.—Bandage and dressings removed, wound looks well, but at two points discharges a few drops of pus; considerable tympanitis in right hypochondriac region above wound; the parts were gently bathed with tepid water and the same dressings reapplied; the wound in the back is partly healing by first intention; the morphia was continued in the same quantities, and no change made in the diet.

October 26th.—Patient still doing well; dressings not disturbed; the morphia was continued in the same doses every sixth hour, day and night; no change in diet; the man passes his water freely, but has no desire to evacuate his bowels.

November 2nd.—General condition still excellent; as the wound has suppurated more freely, all the sutures but two were removed and replaced by adhesive strips, over which the wound was dressed with simple cerate and the bandage as before; wound in back almost well; no change made in the diet, which still consists of barley water twice a day, and oat meal gruel at dinner; recumbent position maintained, and the morphia continued in same amount.

November 5th.—Granulations are extending rapidly along the wound same dressing reapplied; the wound in the back is well, having chiefly closed by first intention, the patient is urgent to have his bowels open, and, as it is now a fortnight since the accident occurred, the morphia is stopped, and an opening enema given; this brought away a copious stool and greatly relieved him; recumbent position maintained, but diet changed to milk morning and evening, with chicken soup and bread at dinner.

November 10th.—Wound almost closed, and sufficiently firm to remove the adhesive strips; patient placed on common house diet.

November 12th.—Wound quite closed and union firm; patient allowed

to rise and walk about, which causes no pain or weakness. Health good and strength returning.

November 19th.—Discharged from the Hospital cured, although still a little weak from rigid dieting and long confinement to bed.

No recent authority upon abdominal wounds has failed to emphasize the value of opium in their treatment, especially if the viscera be wounded; but, in the class which the foregoing case illustrates, sufficient stress has not, I think, been laid upon its use. It is to be observed that peritonitis supervening upon these injuries is generally of the most fatal character, the traumatic loss of blood having often been so great that heroic treatment cannot be employed. Nothing can be more important, therefore, than the adoption of such measures as may ward off this complication; and the observation of a large number of cases, of which that detailed is a type, convinces me that of these agents opium, pushed to the verge of narcotism, properly holds the first place.—*Cal. Medical Gazette.*

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## INSPISSATED CERUMEN:

By D. B. St. John Roosa, M. D., Prof. in the University Medical College.

It is intended, in the papers which are proposed under the above title, to present some of the practical results of an experience in ear diseases, reaching over quite a large number of cases, in such a way that they may be useful as a guide to those who see comparatively little of the diseases of this organ.

Among the laity, and even in the profession, hardening of the ear-wax is regarded as quite a common and harmless affection. All forms of deafness are ascribed to this cause, and the first treatment that many ear patients receive, is a vigorous syringing to see "if the wax be not hardened," and this often without any preliminary examination. Impacted cerumen is indeed quite a common occurrence, but it is by no means as simple an affair as has been generally supposed. I do not mean by this, that it is anything more, as a general thing, than a local affection, but as such, it may produce results very detrimental to the function of hearing. It hardly seems to occur more frequently in persons with a soft skin than others, as has been suggested by some authors, for among the patients whom I have seen, careful examination has failed to detect any such origin. Persons with a dry and harsh skin have as often come to me with impacted cerumen, as the opposite class. A frequent cause is the too careful washing of the auditory canals with soap and water, which some overclean persons delight in doing. This rinsing out the canal plugs the natural yellow wax, which is on its way out, down to

the bottom of the canal, and being continued morning after morning, at last fills up the ear, and when the drum is once fairly covered, and pressed upon, and *not till then*, deafness results. It is somewhat remarkable how long persons may have the ears plugged up with hard wax without being aware of it. On examining persons who present themselves with impacted wax, only causing deafness on one side, we will nearly always find the same condition of things as to the wax, in the other ear. If the cerumen be very black and hard, and if it comes out in one large plug, we may conclude that it has been there for years. I recall two cases in which, from definite accounts, we could safely conclude that five years had elapsed since the deafness occurred. In both of these cases, the hearing became normal after the wax was removed. Impacted wax sometimes causes serious inflammation of the canal and drum. In one case, that of a young lady, suppuration of the drum resulted from hardened wax pressing upon it, and the wax was removed spontaneously like a shot from a pistol, and, as was stated, with almost as loud a report. This evacuation was preceded by the most intense pain. The removal of a plug three fourths of an inch long from the other auditory canal, and which was wedged in very tightly, saved the patient from the inflammation which was so troublesome on the other side. In another case, still under treatment, what was supposed to be on first examination a plain case of inspissated cerumen, was found, after removal of the wax, to be one of inflammation of the integument which lines the canal. The removal of the hardened wax was, as it were, only the removal of a huge scab from an ulcerating surface. I have seen other cases like this.

Inspissated cerumen causes many symptoms. The prominent ones are:

1.—Sudden deafness. 2.—Tinnitus aurium. 3. Vertigo. 4.—Earache.

Of course an examination is the only method of clearing up the diagnosis. This examination should be undertaken with the ear mirror, (or otoscope, properly called,) and not with the syringe. In other words, it should be ocular, and not tactile. The trouble can hardly be confounded with any other affection. Wax which presses upon the drum is almost always black, not yellow, and nearly fills the canal. No decided prognosis can be given from seeing the wax, as to whether its removal will restore the hearing. Hardened cerumen very often forms over a perforated or ulcerated membrana tympani, and is then of course only a small part of the disease. It often results, also, from the dropping of oils into the ear for some therapeutical end seldom attained. The original disease for which the oils were used was then probably an affection of the cavity of the tympanum.

The habit of examining the ear in all cases with head symptoms, will sometimes assist materially in clearing up a diagnosis. I once cured a man from the effects of a supposed sun-stroke, by removing inspissated cerumen, who had been treated for two months in a hospital for cerebral disease.

Patients who have once had impacted wax, are apt to suffer again from the same cause, at least I have seen quite a large proportion of cases in persons who have been affected in the same way before. Such may be advised to have their ears syringed with a solution of bicarbonate of soda and water, about once in two months. The removal of the hardened mass is very often a tedious affair. I once spent an hour a day for a week in removing a mass from the ear of a lady patient. In the interim, the best solvents, such as soda, were used. With previous soaking the canal with a warm solution of soda, say a drachm to the half pint, ten minutes will generally suffice to remove the mass. A good india rubber syringe, holding at least four ounces, should be used, and the auditory canal well straightened by holding up the auricle with the left hand, at the same time syringing with the right. The glass syringes are of no use. The stream sent in should be vigorous but steady, and care taken not to eject it with such force as to cause pain or dizziness. There should never be any pain caused in syringing the ear for any purpose. Where pain is produced, syringing will do harm. A thin bowl is held under the ear by the patient. No assistant is needed. No towel need be placed on the patient's neck, for, with careful manipulation, no water will be spilled.

The ear may contain an astonishingly great quantity of hardened ear wax, and an examination should be made very frequently during the course of the syringing to determine when it is all removed. No after-treatment is necessary. If, however, sounds are oppressive, as they often are, after the removal of large quantities of ear wax, a little cotton may be worn in the meatus for a day or two. The membrana tympani always appears reddened immediately after the removal of the cerumen, and then dull. It will be some days before it regains its normal translucensy. If the hearing be not improved immediately on removing the wax, the middle ear should be inflated by Politzer's method. The drum is sometimes sunken in temporarily, and one or two passages of air through the Eustachian tube will restore its position as well as the hearing.

Professor Gross recommends the use of a pick for the removal of impacted wax. This does very well as an aid where the wax is very hard. If it be used, the surgeon should have a mirror on his forehead, and never

put the pick in the canal, unless he can see just what he is doing. Painful and even destructive inflammation may be caused by this mining out process. The general practitioner, to whom ear cases come in only a small proportion in his daily rounds, had much better rely on the use of a syringe and warm water where possible, having previously moistened the canal with a warmed solution of soda, zinc-sulph, or with glycerine and water, sweet oil, etc. Inspissated cerumen rarely occurs in children. I suppose there is no difference in the liability of the sexes, and I know of no well-established proximate cause, except the one given in the beginning of this article, *i. e.*, packing the meatus by the frequent pouring in of water. Yet, we might say that it is common for hardened wax to collect about a foreign body in the ear, such as a raisin, introduced originally to relieve earache, a cherrypit, etc., but here the inspissated cerumen is only a concomitant. It is hardly to be credited, although formerly generally believed, that a diathesis has anything to do with it, or that there is any disease of the ceruminous glands. The cause is probably in one way or another mechanical—that is, there is some interference with the normal and daily removal of the secretion.—*Medical Record.—Chicago Medical Examiner.*

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## Midwifery and Diseases of Women and Children.

### THE BEST METHODS OF EXPEDITING NATURAL LABOURS.

By W. H. Davies, M. D.

I do not propose in this paper to allude to those cases where, from want of pelvic space or undue development of the fœtal head, it becomes necessary to resort to instrumental delivery; but to a class of cases at all times trying to the patience and demanding the nicest judgment and discrimination on the part of the accoucheur—cases where, from inertia-uteri, rigidity of the os, or want of frequency and force in the uterine contractions, labour may be indefinitely delayed. The agencies at our command are so numerous and varied, that we are often in great perplexity as to the choice we shall make in each particular case. They may be classed as remedial and operative. Of the former, ergot, opium, tartar emetic and borax are highly esteemed; while of the latter, mechanical dilatation, the warm water douche, scarification of the cervix, venesection, etc., are each applicable under certain circumstances. First among the remedical agents that has long been held in high repute, stands ergot; which although usually effective in producing the requisite

amound of uterine contraction, and generally a safe agent as far as the mother is concerned, provided there be sufficient pelvic space, yet we must bear in mind that more children are lost by it than by any other method, and that the nicest judgment is necessary in the selection of cases for its administration; and it must not be forgotten that it is to a large extent an uncontrollable remedy. Borax has been found in Germany of great use, and when combined with ergot is sometimes satisfactory in its action. Opium in many cases is a powerful uterine stimulant, and has the merit of being a safe one; but the best effects in the majority of cases will be obtained from the judicious use of tartar emetic. This remedy will always be found of the greatest service when the os is dry, hot and rigid, while at the same time the pains are severe and regular, but producing no advance of the head. Given in doses of from one-sixth to one-eighth every fifteen minutes until nausea and vomiting are procured, it will rarely be found to fail in producing free dilatation of the os, copious mucous discharge, and regular effective pains. Of course cases will sometimes occur where its use is contra-indicated, but for general service we possess no remedial agent so steadily reliable. Patients will constantly be met with who have strong objections to the use of any medicinal agent; in fact, where any or all of them would be unsuitable, and where operative interference becomes necessary. When we have any suspicion that the inefficiency of the pains depends on intestinal disturbance, a copious enema must be administered, which alone often suffices to procure effective pains; venesection has often been resorted to with marked good, and scarification of the cervix has its earnest advocates. Of all the operative methods, none so recommend themselves to my mind as most generally safe and effective as the warm cervical douche and Dr. Barnes' water bags. The cervical douche is a remedy always at hand, easy of application, pleasant to the patient, while at the same time it is never attended with any untoward results, and when perseveringly applied to the os and cervix will seldom disappoint. In Dr. Barnes' bags we possess a much more powerful dilating agent, one requiring considerable tact in its application, but ever reliable. A small sized bag should be first used, carefully introduced within the os, dilated with water until it becomes fairly wedged, and there allowed to remain until it drops out, when a larger size may be substituted if necessary, and it will seldom be necessary to use a third. The os, under this process, becomes thick, soft and dilatable, and a profuse mucous discharge bathes the surrounding parts, while the pains increase in strength, regularity and expulsive power. The careful accoucheur, if possessed of nice discriminating judgment, will never be at a

loss in the bed-chamber if he is armed with tartar emetic, a syringe and Dr. Barnes' bags, and it will be found that the termination of most cases can be so nicely arranged as to reflect great credit on the attendant and afford vast satisfaction to the patient.—*California Medical Gazette.*

## MEDICAL NEWS.

### CURE FOR OBESITY.

Dr. Gibb of London, recommends the use of the Bromide of Amonium to those who suffer from an excess of fat. When taken in small doses for a length of time it will absorb fat, and diminish the weight of the body with greater certainty than any other known remedy.

### THE ETHER SPRAY IN "POPLITEAL ANEURISM."

Dr. Henry Harrison reports a case of popliteal aneurism in the *Med. Times and Gazette* in the treatment of which the ether spray was applied, in addition to digital and instrumental compression. He inclines to the opinion that this had much to do with the rapid solidification of the rather large tumor.

### LACTATION BY A WOMAN SIXTY YEARS OLD.

Dr. Wm. A. Gillespie, of Virginia, records in the *Boston Medical and Surgical, Journal*, the case of a widow lady, aged about sixty, whose daughter having died, leaving a child two months old, took the child and tried to raise it by feeding. The child's bowels became deranged, and being unable to procure a nurse, and her breasts being large and full, he advised her to apply the child, in hopes milk would come. She followed his advice perseveringly, and to her astonishment, a plentiful secretion of milk was the result, with which she nourished the child, which afterward became strong and healthy.

### PEROXIDE OF HYDROGEN IN DIABETES.

There are few diseases in which every form of treatment has so signally failed, as in Diabetes. Dr. Day of Geelong, Australia, claims however, to have obtained very considerable success in treating this disease by the etherial solution of peroxide of hydrogen, given two or three times a day, in doses of from half a drachm to two drachms in a wine glass full of water. Several other observers in Australia have confirmed Dr. Day's views, and unless the cases published are exceptionable ones, the discovery promises to be a very important one.

# Canada Medical Journal.

MONTREAL, MARCH, 1869.

## THE MONTREAL HOSPITAL FOR SICK CHILDREN.

This is the title of an institution for which application has been made for an Act of Incorporation, and which we hope and have every reason to believe will be in active operation within the next few months. Several meetings have been held, of friends interested in the movement, and a committee named, upon which we notice the names of many active and philanthropic gentlemen. Without at all detracting from the numerous medical charities of which Montreal can with pride boast, we know of none so capable of enlisting the sympathy of the public, as an Hospital specially devoted to the treatment of sufferers of tender years. Their very helplessness appeals loudly on their behalf. It has for years been a reproach to us, that while the mortality among children under five years of age, has attained the frightful rate of 66 per cent, no united effort has been made to give relief and succor to the many hundreds who yearly perish in our city, simply from the want of proper care and attention. Such an institution is therefore loudly called for, and we commend its claims to the wealthy and philanthropic of our city.

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(*To the Editor of the Canada Medical Journal.*)

Sir,—I notice in your February number a paragraph containing a most unjustifiable attack on me by the Editor, who takes upon himself to judge and ridicule a petition for a charitable institution, designed solely for the suffering poor, and which was largely signed by the most influential gentlemen of this city, as well as by most of the medical practitioners in Montreal, among whom are the greater number of the physicians of the Hotel-Dieu Hospital, and cordially endorsed by them, as an institution, which, if reestablished here, would be the means of doing good to many.

The public must be allowed to have their choice in such a matter of life and death to them, as to whether they prefer to be treated where the knowledge of diseases of the eye and ear must of necessity be only of a general character, or in an institution where such diseases have been specially attended to for many years past.

There is no possible cause I can assign for such a tirade against me

and the infirmary in the Journal, one of the Editors having signed the petition.

If the writer of the article takes the trouble to inquire of my standing as a surgeon among my confrères, both English and French, he would find that they are not only so satisfied with my skill, as to have placed members of their own families in my hands to undergo most delicate and dangerous operations, but have also recommended their own patients, when suffering from those diseases which I treat, to come to me.

As to my advertising, following two of the most intricate branches of my profession, a specialty which can only be brought before the public by such means, no surgeon of respectability could find fault with it, as it does not clash with any of the interests of, nor does it detract from the high standing of our noble profession. I remain yours,

L. O. Thayer, M.D.

Remarks.—In the article referred to, we did not judge nor ridicule the petition for aid to a charitable institution "designed solely for the suffering poor." We exercised the right of every public journalist of criticizing a public petition.

We do not think that the writer of the above has any reason for asserting that the knowledge possessed by the medical staff of our hospitals is of so ordinary a character that the best interests of those afflicted with eye or ear diseases, would in any way suffer at their hands. This is more especially the case, as it was at one of these institutions where "the knowledge of diseases of the eye and ear, must of necessity be only of a general character," that Dr. Thayer, laid the ground work, of whatever practical skill he may possess. Furthermore, it is rather un generous on his part to the members of the medical staff of the Hotel Dieu, the greater number of whom, he declaires, signed his petition.

The doctor need not seek for a cause, as there was no desire on our part to injure him personally; but inasmuch as the petition contained an assertion that there was no institution in this city where diseases of the eye and ear could be treated, we were bound to make a contrary statement in view of the fact, that the governors of the Montreal General Hospital, at the suggestion of the medical staff, had made alterations in, and alloted three wards specially for diseases of this class.

With regard to one of the editors of this journal having signed the petition, the Journal has nothing whatever to do. We presume he exercised his right as a private individual to do as he pleased in the matter; that he did not in any way commit the journal by his act, is self evident from the article which appeared in the last number.

As to the question of advertising, we need only refer Dr. Thayer to the Code of Medical Ethics, adopted by the Canadian Medical Association in September last.

The Board of Trinity College, Dublin, have received a patent creating a Regius Professorship of Surgery, and in it Dr. Robert Adams, is nominated the first Professor. The venerable Surgeon's numerous friends in Canada, will rejoice at this recognition of his merits.

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## AMERICAN MEDICAL ASSOCIATION.

The Twentieth Annual Session will be held in New Orleans, La., May 4, 1869, at 11 A.M.

The following Committees are expected to report :—

On Diseases of the Cornea.—Dr. Jos. S. Hildreth, Illinois, Chairman.

On Cultivation of the Cinchona Tree.—Dr. Lemuel J. Deal, Pennsylvania, Chairman.

On Excision of Joints for Injuries.—Dr. J. B. Reed, Georgia, Chairman.

On Alcohol and its Relations to Medicine.—Dr. John Bell, Pennsylvania, Chairman.

On the Cryptogamic Origin of Disease with special reference to recent microscopic investigations on that subject.—Dr. Edward Curtis, U. S. A., Chairman.

On Operations for Hare-lip.—Dr. A. Hammer, Missouri, Chairman.

On Clinical Thermometry in Diphtheria.—Dr. Jos. G. Richardson, New York, Chairman.

On Prophylastics in Zymotic Diseases.—Dr. Nelson L. North, New York, Chairman.

On Inebriate Asylums.—Dr. C. H. Nichols, D. C., Chairman.

On the Influence of the Pneumogastric Nerve on Spasmodic and Rhythmical Movements of the Lungs.—Dr. Thomas Antisell, D. C., Chairman.

To Examine into the Present Plan of Organization and Management of the United States Marine Hospitals.—Dr. D. W. Bliss, D. C., Chairman.

On the Utilization of Sewerage.—Dr. Stephen Smith, New York, Chairman.

On the Influence of Quarantine in Preventing the Introduction of Disease into the ports of the United States.—Dr. Elisha Harris, N. Y., Chairman.

On Nurse Training Institutions.—Dr. Samuel D. Gross, Pennsylvania. Chairman.

On Commissioners to aid in Trials involving Scientific Testimony. —Dr. John Ordronaux, N. Y., Chairman.

On Annual Medical Register.—Dr. John H. Packard, Pennsylvania, Chairman.

On Devising a Plan for the Relief of Widows and Orphans of Medical Men.—Dr. John H. Griscom, N. Y., Chairman.

On Veterinary Colleges.—Dr. Thomas Antisell, D. C., Chairman.

On Specialties in Medicine, and the Propriety of Specialists Advertising.—Dr. E. Lloyd Howard, Maryland, Chairman.

On Library of American Medical Works.—Dr. J. M. Toner, D. C., Chairman.

On Vaccination.—Dr. Henry A. Martin, Massachusetts, Chairman.

On the Decomposition of Urea in Uræmic Poisoning.—Dr. H. R. Noel, Maryland, Chairman.

On the best method of Treatment for the different forms of Cleft Palate.—Dr. J. R. Whitehead, N. Y., Chairman.

On Rank of Medical Men in the Navy.—Dr. N. S. Davis, Illinois, Chairman.

On Medical Ethics.—Dr. D. Francis Condie, Pennsylvania, Chairman.

On American Medical Necrology.—Dr. C. C. Cox, Maryland, Chairman.

On Medical Education.—Dr. J. C. Reeve, Ohio, Chairman.

On Medical Literature.—Dr. E. Warden, Maryland, Chairman.

On Prize Essays.—Dr. S. M. Bemiss, Louisiana, Chairman.

On the Climatology and Epidemics of—Maine, Dr. J. C. Weston; New Hampshire, Dr. P. A. Stackpole; Vermont, Dr. Henry Janes; Massachusetts, Dr. H. I. Bowditch; Rhode Island, Dr. C. W. Parsons; Connecticut, Dr. E. K. Hunt; New York, Dr. W. F. Thoms; New Jersey, Dr. Ezra M. Hunt; Pennsylvania, Dr. D. F. Condie; Maryland, Dr. O. S. Mahon; Georgia, Dr. Juriah Harris; Missouri, Dr. Geo. Engelman; Alabama, Dr. R. F. Mitchel; Texas, Dr. T. J. Heard; Illinois, Dr. R. C. Hamil; Indiana, Dr. J. F. Hibberd; District of Columbia, Dr. T. Antisell; Iowa, Dr. J. C. Hughes; Michigan, Dr. Abm. Sager; Ohio, Dr. T. L. Neal; California, Dr. F. W. Hatch; Tennessee, Dr. B. W. Avent; West Virginia, Dr. E. A. Hildreth; Minnesota, Dr. Samuel Willey; Virginia, Dr. W. O. Owen; Delaware, Dr. L. B. Bush; Arkansas, Dr. G. W. Lawrence; Mississippi, Dr. ——Compton; Louisiana, Dr. L. T. Pimm.

Secretaries of all medical organizations are requested to forward lists of their Delegates as soon as elected, to the Permanent Secretary.

Any respectable physician who may desire to attend, but cannot do so as a delegate, may be made a *member by invitation*, upon the recommendation of the Committee of Arrangements.—W. B. Atkinson.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Report of the Post Mortem Examination of the body of the late Hon.* THOMAS D'ARCY MCGEE, *with other matters connected with the scene of the murder, by* D. MCGILLIVRAY, M.D.

Believing it to be of interest, I am induced to send you for publication in your journal the report of the post mortem examination of the body of the late Hon. Thomas D'Arcy McGee, who was assassinated at the door of his lodgings in Ottawa, on the morning of the 7th April, 1868, together with other matters incidental to the murder; such as the position of the body—descriptive of the scene of the murder, and supporting facts elicited by the autopsy: and also a representation of the fatal bullet. The report may be interesting not only on account of its subject, but also in a forensic or medico-legal point of view.

*Position of the body.*—The lifeless body of the Hon. T. D. McGEE, was found lying on its back on the sidewalk obliquely and opposite the door of his lodgings, head pointing to the street, and slightly northwestwards. The hat was still on the head. The legs were slightly separated and extended towards the door, the right arm was partially extended and the hand ungloved. The left arm was extended at right angles to the body and the hand gloved. The glove of the right hand was lying on the sidewalk next to the left hand, and his cane was lying under the body and passing over the left elbow. The face and left side of the neck were covered with blood, and the mouth was covered with sanguineous froth. A large quantity of arterial blood had escaped from the body by the mouth and had flowed in a stream down the sidewalk into the ground. The body was but a short distance from the door of the house—the distance from the near or west end of the door-sill to the feet of deceased was about thirty-five inches, and from the remote or east end, four and a half feet. His latchkey was in the hole of the latchlock, and suspended to it several other keys

by means of pink coloured tape. A pistol bullet was impacted in the side of the door a few inches above the hole of the door-latch. Portions of three artificial incisor teeth, and also a cigar stub were lying on the hall floor inside the door, about eighteen inches from the door-sill. Spots of blood were on the staircase near the door, and the lower panels of the door were bespattered with blood. The body was quite warm and had been but a very few minutes dead.

*Post Mortem.*—The *post mortem* was performed ten hours after death. On a superficial view the body appeared very fat, muscular and extremely pale. There were no discolorations or marks of violence observable except a pistol shot wound in the back of the neck. A large pitch plaster was closely adherent to the posterior region of the chest. There was a cicatrix of a recent ulcer on the outside of left ankle. The trunk of the body was yet warm. The upper and lower extremities were cold and slight cadaveric rigidity of the neck and lower extremities existed. The face and left side of the neck were covered with blood, and the mouth was covered with sanguineous froth. The hair on the back of the head was singed and saturated with gunpowder in sufficient quantity to blacken the fingers on rubbing the hair between them. The smell of gunpowder was unmistakeable. The head was large and massive, forehead high, broad and full, hair black and wavy, commingled with grey.

*Brain.*—The brain was first examined. On removal of the calvarium it was found to be unusually thin and transparent. The medical men present conceded that they had never observed any human skull so thin and so remarkably translucent. The brain was very large, weighing fifty-nine ounces. It was unusually firm and compact to the touch, but not to say hard; on dissection it proved to be in the normal condition throughout its entire substance. The membranes were in a healthy state. A small quantity of lymphy effusion existed in the arachnoid on the superior segment of the left hemisphere and in this locality a few minute adhesions existed between the arachnoid and pia-mater—a few thread like filaments extending between them. The convolutions were remarkably, tortuous and prominent. The encephalic mass did not appear to be unusually exsanguine.

*The abdominal and thoracic cavities* were next examined. The adispose state of the body was confirmed on the first incision. The fat was upwards of an inch thick over the breast, and fully two inches over the abdomen.

*Lungs.*—The lungs contained sanguineous frothy serum and mucus. This was more noticeable in the left lung. Both lungs were firmly ad-

herent to the walls of the chest latterally and posteriorly. In the latter situation the pleuritic adhesions were stronger, more extensive and thoroughly organized, slight congestion of both lungs existed posteriorly, it appeared to be hypostatic and was more apparent in the right one. Otherwise the lungs were in a perfectly healthy state.

*Heart.*—The heart was of the natural size, but thickly covered with fat. The pericardium was loaded with fat and contained about an ounce of serum. The heart was perfectly healthy and its valves were in the normal condition. Both auricles and the ventricles and large vessels were completely empty of blood. It weighed seventeen ounces.

The abdominal cavity was thickly lined with fat and the omentum and intestines were also thickly covered with fat.

*Liver.*—The liver was of the ordinary size, weighing four pounds five ounces. It presented a smooth appearance externally. Its substance was very friable, granular and fatty, the knife after passing through it presented a greasy appearance. The gall bladder contained a small quantity of bile. There was nothing else observeable about this organ.

*Stomach.*—The stomach was of the normal size and perfectly healthy; it contained half a pint of solid and liquid undigested food which appeared to have been but very recently taken.

*Kidneys.*—The kidneys were of the natural size and perfectly healthy; each kidney weighed, with the adipose tissue attached to it, nine ounces, and without the fat, five ounces. The intestines and the other organs were in the normal state. There were no unusual appearances noticeable in the spleen, except its being in common with the other organs very pale and exsangnine; it was of the ordinary size. The thoracic and abdominal cavities were yet quite warm.

*Wound.*—The wound was next examined, and a long silver probe having been passed through the course of the bullet from the point of entrance in the back of the neck to the orifice of exit the mouth, the skin and superficial fascia of the right side of the neck were then cut and turned aside, and the muscles carefully dissected down to the probe. The following lesions were found to exist. Externally an oval aperture in the skin on the back of the neck, immediately to the right of the spinal column, having depressed and inverted edges, and nearly of a size to admit the point of the little finger, its longest diameter being a quarter of an inch and its shortest a little less. Internally, fracture of the right transverse process of the third cervical vertebra, division of the right internal carotid artery, jugular vein and pneumogastric nerve and laceration of the back part of the pharynx. There was a small wound in the top of the tongue, and three artificial incisor teeth were broken

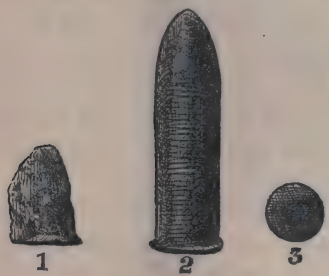
from a gutta percha plate attached to the upper jaw. It was palpable that the bullet *entered* the *back* of the neck, and produced the injuries above named, and escaped by the mouth, carrying with it the incisor teeth from the upper jaw.

From the facts elicited by the *post mortem* examination, and the fact of the presence of a large quantity of arterial blood on the sidewalk where the body was found, it was clearly and demonstratly evident that death was caused by hemorrhage, the result of a pistol-shot wound.

(Signed,) DONALD MCGILLIVRAY, M.D., &c.
J. F. WOLFF, L.C.P.S., L.C.

Ottawa, April 7, 1868.

REPRESENTATION OF THE FATAL BULLET.

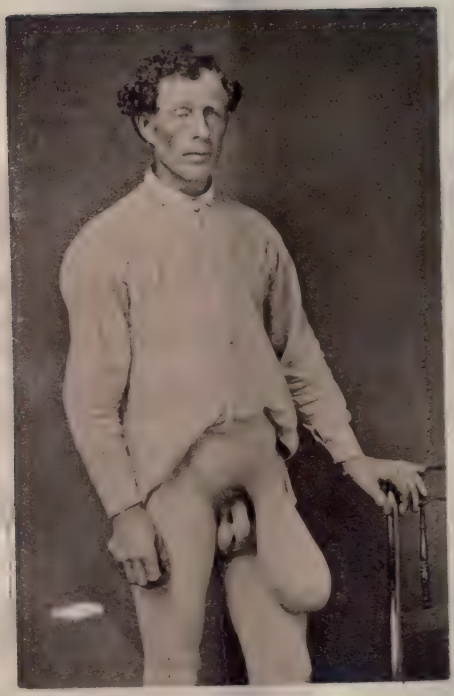



No. 1 represents the fatal bullet in its flattened and damaged condition, from striking the vertebral process and partially from striking the door.

No. 2. The cartridge and bullet in the original state.

No. 3. The flat end of the bullet, shewing its diameter. The pistol which the ball No. 1 fitted, and which was found on the person of the assassin was a No. 5 Smith and Wessen, and No. 2 represents one of the cartridges found in it and marked L.

A large number of professional gentlemen were present at the autopsy, among whom were the following: Dr. Bown, M.P., Dr. Pauquette, M.P., Dr. Fortin, M.P., Dr. Robitaille, M.P., Dr. Dickinson of Cornwall, Dr. Pyne of Oakville, Mr. Hubertus of Toronto *Globe*, Dr. Corbett of P. C. O. Rifle Brigade, Capt Smyth of the 100th Royal Canadian Regiment, Mr. McAulay, Mr. Kennedy, Dr. H. Hill, Dr. Ed. Vancourtlandt, coroner, Dr. C.Beaubien, Dr. Geo. Chesley, Dr. Palso of Oakville, the Hon. Sir George E. Cartier, Bart., M.P. for Montreal, entered near the conclusion: he was deeply affected, exclaiming, "Poor McGee! poor man! he was such a good——" He walked several times up and down the room, sobbing bitterly, evidently overcome by the intensity of



Dr. Drake's Case of Fatty Tumour.

his feelings for the sad end of his late colleague. He remained in the room but a few minutes. Hon. Peter Mitchell also entered late, and remained but a short time. Besides the above, other prominent citizens attended.

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*Fatty tumor with bone like degeneratian—Removal.* By Joseph M. Drake, M.D., Professor of Clinical Medicine University of McGill College. (Illustrated by a photograph.)

Denis Laberge æt 42, and unmarried, was admitted into the Montreal General Hospital on the 20th August 1868, having a large tumour hanging from the left inguinal region.

*History.*—Has always enjoyed good health although at one time used liquor to excess. Has always worked in lumbering shanties, where he had frequently to undergo great hardships. Eight years ago, while at work loosening logs that had become jammed at the head of a rapid, a heavy plank fell against him, the end striking him in the groin. He was confined to bed for a week and suffered a great deal of pain ; about a month after this accident noticed for the first time a slight swelling in the inguinal region. It was soft and about the size of a hens egg. It gradually increased for about two years, when it reached its present size. Has not grown any for the last six years; after a hard days work jumping from log to log it was very painful, but at other times suffered no inconvenience beyond that caused by its weight.

*Present condition.*—The tumor is estimated to weigh about six pounds ; it measures 16 inches in circumference, $7\frac{1}{2}$ inches in diameter and $11\frac{1}{2}$ inches from its point of attachment to its pendant extremity. It has all the characters of a fatty tumor, but on the interior can be felt a hard lobulated mass. The skin covering it is not thickened but is marked with scars which he says, were caused by his striking the tumor against obstacles, when he was at work in the water. Its attachment appears at first sight to be only skin, but a closer examination reveals about the centre a distinct hard cord leading from under Poupart's ligament, to the hard lobulated mass.

*Operation.*—On the 22nd of August 1868, Dr. Drake removed the tumor without difficulty. No vessels of any consequence were found to be feeding it. On the tumor being opened the hard lobulated mass was found to be osseous in character, the whole mass being about the size of an average sized man's closed fist. This structure presented all the external appearance of bone, showing that the centre of the tumor had undergone osseous degeneration, an event of exceedingly rare occurreuce. The remainder consisted of lobules of fat, here and there shewing patches

of cartilagenous structure. The osseous mass had a fibrous cord leading from it to the under part of Ponparts ligament. There was an artery and a vein in connection with it, but they were of small size.

The patient made a very rapid recovery, and two weeks from the day of the operation he left the Hospital perfectly cured.

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## REVIEWS AND NOTICES OF BOOKS.

*On Diseases peculiar to Women, including displacements of the Uterus* By Hugh L. Hodge, M.D., Emeritus, Professor of Obstetrics and Diseases of Women and Children in the University of Pensylvania. Second Edition. Philadelphia: Henry C. Lea. Montreal: Dawson Brothers.

When one hears of irritability of the bladder, rectum or stomach, distinct affections, giving rise to certain symptoms and having well known pathological conditions present, there is no difficulty in comprehending what is meant; but when the term, irritability of the uterus is employed, we are apt to shrug our shoulders, for we hear the term so often used, without reference to any specific complaint, that it must be confessed we do not fully understand its signification. Dr. Gooch, and Mr. Brodie were the first who promulgated the theory that "Irritability was a morbid state, irrespective of any other lesion. "Although their conclusions met with considerable opposition, and even still do so, yet many heartily endorse them, and among the number, none more warmly than Dr. Hodge, the author of this volume. Indeed after a very careful examination of his book, we find that his entire object is to exemplify the nature, consequences and treatment of nervous irritation as distinct from inflammation. The opening chapter gives in brief the views of the leading authorities on the subject. Dr. Bennett of Edinburgh, and Dr. Byford of Chicago, denying its existence, while Drs. J. Y. Simpson, Graily Hewitt, West, Ingleby and others strongly assert that they have repeatedly seen it present, independent of inflammatory action. The second chapter opens as follows, and in brief defines Dr. Hodges definition of irritable uterus.

"What idea is to be associated with the expression, 'an irritable uterus?' No other than that the organ is more sensitive—more easily excited—than when in a healthy state. It is no longer in a normal condition, but in an abnormal, unhealthy, diseased state. This diseased condition has reference, let it be observed, not to its circulatory system,

and, of course, not to its organic life, but to its nervous system, its animal life. It is a state not of organic irritation, but of nervous irritation. In simple uncomplicated cases, the alteration of the sensibility is the only indication of its existence. There is necessarily no turgescence of the organ, no congestion, active or passive, no inflammation, and, of course, no alteration of structure in an irritable uterus, even after the lapse of years. Congestions and inflammations, when found, are complications, sometimes the result of the nervous excitement of the organ, but frequently adventitious and secondary, or accidental.

"In a normal state the uterus can be pressed upon and pushed in various directions, almost without the consciousness of the woman; but, from various causes, this quiescent condition of its animal life may be disturbed. Its vitality is exalted, it becomes more excitable; slight impressions cause sensation, pain, even severe pain, spasms, cramps, and other evidences of nervous irritation, of morbid excitement. It has passed from a healthy to an unhealthy state, as regards its nervous system; it is morbidly sensitive; it is "irritable." This state is a simple exaltation of a natural vital property, sensibility, and constitutes a nervous irritability beyond its normal or healthy standard."

As might be surmised the predisposing cause of this condition is "nervous temperament." By this is meant that certain persons are from their original organization, peculiarly impressible, easily excited or depressed in everything that regards their cerebro-spinal system. Early marriage, Dr. Hodge thinks predisposes to nervous affections; indeed he states marriage is frequently the cause of hysteria, especially in erotic habits, and where no conception ensue. At page 236, he draws the following conclusions.

"A review of the causes of irritable uterus will, to a great extent, enable us to answer the repeated inquiry, why nervous affections of the uterus are so much more prevalent and distressing during the present than the past generation. The answer is twofold, or, perhaps, threefold. The first relates to the predisposing states of the patient's system. The nervous temperamant of women of the present age has been greatly developed by the wonderful increase of the indulgences and luxuries of modern life. The physical education of the girl has been most carelessly and thoughtlessly disregarded; while every stimulus has been applied to procure a precocious development of the mind, the heart, and the passions. The organic life has been neglected, while the animal has been unduly and too rapidly excited. Another answer to the query is, that the tight dresses, the weight of garments, the braces, etc., to which girls are subjected, are more constantly resorted to, and are of a more decided character than those employed by their ancestors.

"Perhaps it should be added, that the greater frequency of uterine diseases is more apparent than real. Formerly these complaints passed under other names."

In describing the pathology our author says an irritable uterus is that state of the nerves of the organ, in which they are preternaturally susceptible to impressions. There may be and often is no perceptible disturbance of organic life. It is merely a disease of animal life.

If however a severe or continued irritant disturbs this irritability, the irritation may be followed by pain, spasm, or by various distressing nervous sensations, which may radiate to distant parts. In other cases, it is succeeded by congestion or engorgement. This is not inflammatory congestion, but that modification of congestion resulting from nervous excitement as in menstruation, erections &c. * * * there is no permanent alteration of structure, and the recovery is often perfect and sudden. The treatment is entered upon with chapter, ix. and is fully described. Rest with tonics, especially the preparations of iron, are strongly recommended, as are daily injections of cold water into the vagina, and at times the rectum. We think a word of caution should have been given with regard to the use of cold injections; for we have seen cases of the most intense uteriue colic produced by some of the fluid entering the cavity of the uterus. Care should be taken to direct the current well back. The remainder of the volume is devoted to the consideration of uterine displacements, and Dr. Hodge attributes many anamolous symptoms, which frequently occur to this cause. The illustrations are fairly done, and the work contains considerable valuable information, although we must confess we notice numerous repetitions.

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*Essentials of the Principles and Practice of Medicine, a hand-book for Students and Practitioners.* By HENRY HARTSHORNE, M.D. Second edition revised and improved. Philadelphia: Henry C. Lea, 1869. Montreal, Dawson Brothers.

This is a very handy little volume, and one worthy of a place in the library of every physician. It contains, in a condensed form, the symptoms, causation, diognosis, prognosis, and treatment of the majority of medical and surgical diseases to which the human subject is heir. The arrangement is perfect. A careful examination of its contents assures us that its author is thoroughly conversant with the medical literature of the day. In the treatment, especially, we notice that mention is made of every case where new remedies have been suggested. and their value, so far as ascertained, noted. An occasional glance at this work would do much to refresh the memory of those whose time is so completely occupied as to preclude the possibility of systematic treatisies being examined.

# PERISCOPIC DEPARTMENT.

## Surgery.

### ON SYRINGING THE EAR.

Dr. Roosa, of New York, has the following remarks in *The Medical Record* on this simple yet important operation :

" There is a proper and an improper way of syringing the ear, simple procedure as it is. If we use one of the miserable little glass syringes, so commonly sold for injecting the meatus, without taking hold of the auricle at the same time, in order to straighten the auditory canal, the upper wall of which, in a normal condition, falls down toward the lower or anterior wall, very little of the fluid will enter the ear.

If, again, the vessel in which the water is to be returned from the ear be not properly held, the fluid will run over the patient's neck, and cause very unpleasant sensations.

In order to syringe the ear properly, a hard rubber syringe should be used, and a thin bowl be held close under the lobe of the ear well up into the fossa at the articulation of the lower jaw with the temporal bone. The patient himself, if he be a large child, or an adult, will hold the bowl better than an assistant. The surgeon then straightens the meatus by gently pulling the auricle in an upward direction with one hand, while with the other he uses the syringe. It is well to allow the water to first pass into the concha of the auricle, and not immediately into the canal, in order that the patient may judge as to the temperature of the water, which should be lukewarm. The ear will not usually tolerate a cold fluid.

Performed with a good syringe, and with such precautions as have been named, syringing the ear becomes very pleasant to the person who is subjected to it. Children who have already been to a physician who has manipulated in the auditory canal with a forceps or other instrument, will, of course, object to the syringing, from fear of pain ; but if no such attemps have been made, the youngest child can soon be coaxed out of any unwillingness to submit to the operation. I was once, however, compelled to etherize a child, in order to remove a pea by syringing, which had been previously hunted for with instruments.

It is theoretically reasonable that the injection of water is a potent agent in removing a foreign body from the ear. It is sufficient to remove a plug of wax, which has been impacted for years, and which has completely plugged up the auditory canal. How much more potent must be the stream of water, when there is sufficient space through which it may

get behind the foreign body and wash it forward by the returning current! Experience also confirms what theory thus indicates. There are no cases on record, I think, where syringing, when undertaken before any other attempts have been made, failed to remove a foreign body from the ear.

Unfortunately however, those who believe in the efficacy of the simple procedure of syringing do not always see these cases at first. The foreign bodies are often impacted, or so situated that a stream of water cannot pass behind them. There is often also very great inflammation of the parts, caused, not by the foreign body, but by the attempts to remove it. If it be plain that the foreign body is not causing the severe symptoms, a little delay may be advised, until proper local treatment—the use of leeches, and the instillation of warm water—has subdued the inflammatory process. If it be probable that the foreign body is wedged in upon the drum, or perhaps pushed through it into the cavity of the tympanum, there is nothing to be done, but to remove it at all hazards. Perhaps the best way, in case all attempts by means of delicate instruments introduced into the canal (which is at the same time well illuminated by a concave mirror placed on the forehead by means of a band) have failed to reach the body, will be to adopt Tröltsch's suggestion and detach the auricle posteriorly, and thus reach the body from behind. Having thus separated the auricle from its attachment, the membrana tympani will be thoroughly exposed, when it will be very easy to remove anything which may be upon it. Of course all other reasonable and safe means should be employed before resorting to this operation, although it cannot be considered a dangerous method, which can hardly be said of the forcible attempts made through the auditory canal.

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## CASES ILLUSTRATING THE EFFECTS OF AN ADHERENT PREPUCE UPON THE URINARY ORGANS.

Under the care of Mr. Thomas Bryant.

It cannot be too much kept in mind, said Mr. Bryant the other day to his class, that an adherent prepuce by itself is capable of producing symptoms of difficult micturition, incontinence of urine, retention of urine, intermittent flow of urine, hæmaturia, and, indeed, any other symptom of urinary disease; for it seems that every source of irritation at the renal end or the external end of the urinary passage is referred to the bladder, or rather shows itself in the most marked degree in that viscus. In any case, consequently, of supposed stone in the bladder in a child, the penis should be well examined, for in a large number of cases the symptoms of stone will be found to be caused by an adherent or elongated prepuce.—*Medical Times and Gazette.*

## TREATMENT OF EPISTAXIS BY SIMPLE COMPRESSION OF THE NOSTRILS:

By R. P. B, Taaffe M.D., M. S. Lond., Surgeon to the Brighton and Sussex Infirmary for Diseases of the Eye.

A few days ago, I was called to a case of severe epistaxis of an active character. The patient, a middle-aged man, had been the subject of a good deal of hard brain-work. He had suffered from severe epistaxis on several occasions, for which he had been variously treated, locally and constitutionally. The local treatment, hitherto found successful, was the injection of iced water.

When I saw the patient, he had been bleeding from the nose for some time, and on the day previous had lost so much blood that he fainted. On the whole, the loss having been so considerable, I felt justified in interfering. The thought struck me to try what simple compression of the nostrils close to the nasal bones between the thumb and forefinger would do. I first tried the compression myself, then the patient used his own fingers, first of one hand, then of the other; in the course of about twenty minutes the bleeding was completely arrested. The simplicity of this plan of treatment, when compared with plugging the nostrils, must be apparent. In no medical or surgical work, as far as I know, is mention made of this method.

The situation of the bleeding vessels has generally been supposed to be rather high up in the nares, but here was a case in which the bleeding vessel (or vessels) was either situated below the hard parts, rendering compression comparatively easy of application; or if situated up, the compression caused a clot to be formed, having a firm basis of support, and so plugged the bleeding points. In all cases of epistaxis requiring interference, to which I may in future be called, I shall certainly first try what simple compression of the nostrils between the finger and thumb will do before proceeding to further treatment.—*British Medical Journal.*

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## AN IMPROVED MODE OF REDUCING BACKWARD DISLOCATIONS OF THE ELBOW JOINT.

By Wm. H. De Champ, M. D., of Grand Rapids, Michigan.

I deem it the duty of each member of our profession to bring to light, and place upon record, any improvement, either in surgery or the general practice of medicine, whenever he becomes satisfied of its worth.

This system, or course of procedure, of placing upon record any principle or fact likely to prove of service to the profession at large, is one of the distinctive differences between pure scientific procedure and that of charlatanism.

This I propose to do with regard to a method of reducing backward dislocations of the *elbow joint*, which has proved far more simple and easy than any of the methods now in use or at present recommended.

My attention was first called to this while reflecting upon the great simplification made in the reduction of dislocations of the *hip joint* by Dr. W. W. Reed, of Rochester, N. Y., at so late a date as 1851. So important improvement as this to be made after thousands of as eminent surgeons as will ever adorn the profession, had failed to discover it, was enough to cause inquiry, whether other joints had not been equally neglected.

Laying aside all knowledge of reduction of the elbow joint in the backward direction, and taking the anatomical structure of this joint into account, I was forcibly struck with the ease with which this dislocation could be produced, by the hand becoming fixed, and then flexing the arm in the wrong or backward direction. This I had always noticed was the position patients would give as the one the arm was in when it was dislocated.

I found, as every one will, that by simply placing the bones in the position of this injury, and then commencing to flex the arm in the backward direction, while the fore-arm is pulled slightly forward, the olecranon process is caused to glide directly along the posterior flat surface of the humerus, until it arrives at the olecranon fossa, when the reduction is accomplished by simply flexing the arm forward into its normal position.

Within the past four months I have reduced three cases by this method. The mode of manipulation is as follows, viz: The wrist is clasped by one hand while the other is placed back of the elbow, and the effort made to flex the arm in the wrong or backward direction, at the same time moderately pulling upon the wrist, when the bones are found readily to resume their normal position; the work being accomplished in far less time than it can be described.

By this method the coronoid process is not drawn directly into the olecranon depression, as it is by pulling in the straight line as sometimes recommended, but is lifted out of, or over it, with no more strain upon the ligaments than is required to let it pass out of its normal place.—*Detroit Review of Medicine.*

# Medicine.

## CASE ILLUSTRATING THE NATURE OF EPILEPSY

By Prof. L. Marowsky of Charcow Russia.

This case is reported as a further contribution to the researches of Dr. Nothnagel concerning the origin of the epileptic attack, and the author is of opinion that it proves beyond controversy that many, if not all, forms of epilepsy are owing to a spastic contraction of the cerebral arteries; in other words, that epilepsy is a *vasomotor neurosis of the brain.* The arterial spasm may be induced by various causes, either directly or by reflex action; hence the multifarious forms and modifications of the disease. Whenever these causes are known, or discovered *post mortem*, we speak of symptomatic epilepsy;"—when they remain unknown, we " call the disease "essential" (idiopathic) epilepsy.

The case is that of a cadet, æt. 16, with a moderate phlegmonous inflammation extending from the left ala of the nose to the middle of the left cheek. The young man was naturally very excitable, nervous, but of strong build and in good condition. The tumor was very painful, at the circumference hard and red; the centre was dark-red, almost livid, and showed fluctuation so distinct as to indicate the propriety of opening the abscess. This little operation was performed immediately, the patient standing. A small, but sufficient, opening had scarcely been made with a sharp lancet, when the skin immediately around the incision which had been dark-red, became perfectly white. This white margin rapidly extended farther and farther, all of the red inflamed surface became as white as chalk, the patient became restless, his pupils dilated and his countenance grew pale; he fell, lost consciousness, and, after a slight tetanic contraction, was attacked with clonic convulsions of the face, hands, and feet, and foaming at the mouth. After a half or at most one minute, the convulsions ceased, the patient became quiet, his face reddened, the pulse, which had been slow, contracted and tense, became frequent and easily compressible, the skin moist, and after five or ten minutes the patient awoke, remembered nothing of the accident, and for the rest of the day remained depressed, feeble, and incapable of mental exertion.

The author supposes that he had caused, by the incision, a reflex spasm of the cerebral arteries, leading to general anæmia of the organ, which then caused convulsions and loss of consciousness. The tonic contraction of the cerebral vessels must have been general, affecting the base as well as the periphery, because loss of consciousness occured simultaneously with general tonic and clonic convulsions.

The patient has been under observation for two years since this occurrence, bnt never had a second attack; nor ever suffered from an epileptic attack previously, though he had always been very irritable as a boy.

## THE PREVENTION AND TREATMENT OF SUNSTROKE.

By W. C. MacLean, M.D., Professor of Military Medicine, Army Medical School, Netley.

The number of cases of sunstroke reported in the general and medical press, induces me to offer a few observations chiefly on the prevention and treatment of this formidable affection. In my article on Sunstroke, published in the second volume of "Reynold's System of Medicine," I pointed out that sportsmen in India constantly expose themselves in the hottest weather when in pursuit of game. Those who use reasonable precautions, who protect the head and nape by a head-dress adapted to the purpose, wear loose clothing of a suitable material, and abstain from stimulants, rarely suffer from sunstroke.

On the other hand, men who are made to undergo fatigue under a hot sun, dressed as British soldiers generally are, in tight-fitting clothes, and encumbered with heavy and badly-adjusted accoutrements, wearing a head-dress which not only gives no protection, but concentrates the sun's rays on their heads, suffer from insolation in a fatal form. In illustration of this, I quoted the well known example of the 68th Regiment, which, dressed and accoutred in the manner above indicated, paraded at Madras at an early hour in the afternoon in one of the hottest months of the year, to attend the funeral of the late General M'Dowell. The result, as my friend Sir Randal Martin has described, was, that before the funeral parade was over, the men began to fall senseless; one died on the spot, two more in less than two hours, and men suffering from insolation in various degrees were brought into hospital all that night and part of next day. I further illustrated this part of the subject by the case of the 98th Regiment, which, dressed and accoutred as above, took part in the capture of Chin-Kiang-Foo, the final military operation of the war in China, under Sir Hugh (now Lord) Gough. A great many men were struck down by the sun; about fifteen died on the spot. For the most part they fell on their faces, gave a few convulsive gasps, and expired. It is a noteworthy fact, of which I was an eye witness, that the 18th Royal Irish and the 49th Regiments, employed on the same day, in the same service, and exposed to the same fierce heat, hardly suffered at all. Why? They marched and fought under the guidance of officers experienced in tropical war, who had for their advisers medical officers of equal experience, and the result was that the soldiers went into action without their leather stocks, with their jackets loose and open, and, above all, with white covered forage caps on their heads. In the same article I have shown how high temperature induces a variety

of the same terrible symptoms when men are massed in ill-ventilated barracks, and gave some historical examples in point. From the above, some important lessons may be gathered for our guidance in this exceptional season.

In such tropical weather as we now have, troops should parade for exercise only in the early morning or evening, and even then as little encumbered as possible; and, in case any man should fall out, an abundant supply of water should be at hand for drinking and douching purposes.

For those who are obliged to exert themselves in the sun, cold tea is the safest and, in the long run, the most refreshing beverage. Every experienced Indian sportsman will subscribe to this. It is notorious in the East, that the sportsmen who "come to grief" from the sun are those who endeavour to "support nature" with brandy and water and strong ale.

When walking in the sun, particularly in the hot streets, when there is little movement in the air, the use of an umberella, with, for choice a white cover, can hardly be thought effeminate. It is almost useless to add, after what has been said, that at such a temperature as we have lately had, it is dangerous to mass a number of people in ill-ventilated dormitories, although it is probable that the formidable symptoms of what may be called barrack insolation are seldom seen under a temperature of 90° Fahr.

The best and safest mode of treating a person struck down by heat is at once to remove him to the nearest shade, to strip him, and assiduously to douche him with cold water over head, neck and chest. By this means a powerful impression is made on the cutaneous nerves, the effect of which is to set suspended respiration in motion, at first by catches and gasps, finally in a more regular manner. If the heat of skin be, as it usually is, high, this simple operation should be done again and again. The patient should be made freely to drink of ice-cold water, if that be at hand; if vomiting results so much the better, for it will mechanically aid in diminishing extreme congestion of the lungs, which is one of the most invariable consequences of the attack. The patient should be made to inhale ammonia, with the usual precautions, from time to time. As soon as sensibility is restored, it is well to give a purgative; moderate diarrhœa favors recovery. If sensibility be not restored by the above means, shave the head and apply a blister. In the convulsive form of the disease chloroform may be inhaled, as advised by Dr. Barclay, but always under medical supervision.—*Lancet.*

## SUN STROKE.

By Dr. Peters

This disorder is also called heat-apoplexy, and is supposed, by some, to be allied to simple apoplexy, or that variety which sometimes proves fatal without leaving any traces of congestion, effusion or extravasation behind; by others it is compared to alcohol-apoplexy.

There are two theories of the disease: 1st, that it arises from liquefaction and expansion of the blood; 2nd, from a depressed condition of the cerebro-spinal and lymphatic nervous systems. The mortality is very great, at least, 40 to 50 per cent., because this disease attacks by preference those who are sick or debilitated, or accustomed to indulge too freely in sprituous drinks. It has been noticed that those attacked have often been affected for a few days previously with suppression of perspiration and irritability of the bladder; their nights have been sleepless, and attacks of vertigo, and a sense of weariness have been complained of. Then the patient becomes listless and stupid, merely says that his head feels queer, and may be dead in twelve hours more. But the attacks generally commence with faintness and great prostration, thirst, great heat and dryness of the skin, and tightness across the chest, while the pulse is so slow and feeble that it can scarcely be felt. Then follow symptoms of stupor and insensibility, with loss of speech. When the patient becomes comatose the skin is found very hot, the pupils contracted, the conjunctiva congested, the pulse hard, full and rapid, and the breathing difficult. In some cases tetanic convulsions occur. Just before death the pupils dilate, and the action of the heart becomes feeble and intermitting.

In some cases the common treatment with cold to the scalp and the frequent administration of stimulants is allowable; in others it is very injurious. When there is a combination of alcohol and heat-apoplexy, of course spirits must be avoided, or else given in spts. mindereri, although hartshorn and ginger, or some hot drops may be required. When there is congestion to the head, with great heat of skin and a full hard pulse, cold may be applied by pouring a continuous stream of water over the head and chest, and cooling tonics and astringents, like dilute *phosphoric acid*, should be freely given.

When there is utter exhaustion, and the pulse very weak and the skin cold, ammonia and brandy should be frequently given in doses proportioned to the depression, and persevered with to the last.

When recovery takes place, convalescence may be retarded by congestion of the kidneys, which occurs in very many cases; or by dilatation of the vessels of the brain from a debilitated or subparalytic state of their

walls; by partial paralysis and great prostration of strength; by severe headache or vertigo; by confusion and dullness of mind, while symptoms of paralysis or of insanity may set in months after an apparent cure. To obviate the major part of these troublesome and threatening effects the free use of dilute *phosphoric acid* is almost indispensable.—*New York Medical Gazette.*

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## EMPYEMA AND ITS TREATMENT BY PERPETUAL DRAINAGE.

An extremely valuable clinique was that held by M. Gosselin on a case of empyema, that he had had under his eyes for two years, and in relation to which he suggested several ideas that are not everywhere current.

Until recently (observed the Professor) suppuration of the pleura was regarded as a necessarily fatal disease, both on account of the exhaustion induced by the long continued drain on the system, as also by the habitual co-existence of grave pulmonary disease. No cure is possible unless on the condition of entirely evacuating the pleural cavity, which can only be effected spontaneously by the establishment of a bronchial or cutaneous fistula. In a few cases children have been known to recover after the establishment of the first kind of fistula, or vomica, as it is technically called, but only uncertain reliance can be placed upon the benignity of this mode of evacuation, and no physician has the right to provoke it. On the other hand, the cutaneous fistula is even more dangerous, air insinuates itself into the cavity, decomposes the pus, and prevents the dilatation of the lungs, which gradually assume a state of definite collapse. Hectic fever sets in, with all its train of symptoms, cough, diarrhœa, and everything indicating the absorption of purulent matters, and the patient is generally carried off in two or three months at the furthest. Modern surgery, however, has ventured to interpose the operation of thoracentesis as an attempt to arrest the fatal march of this serious disease. This operation, whether performed by simple puncture or incision, is (according to Gosselin) essentially the same, and essentially useless unless accompanied by a certain precaution presently to be described. In the first case, the little wound speedily cicatrizes, and a repetition of tappings is required, which finally results in the establishment of a fistula. By this the pus indeed escapes, but the air also enters, with the consequences above described. The same thing is true of an incision, and although there was more chance of success after Sedillot suggested counter-openings, and the use of injections to wash out the cavity, the results were still far from satisfactory. M. Chassaignac, however, has had the happy idea of inserting by the two openings perforated caoutchouc drainage tubes, which afford free and continual exit to the pus, and thus neutralize any evil ef-

fects resulting from the inevitable ingress of air. For the pus, however decomposed, is innoxious if able to freely escape, instead of being shut up in a close cavity, and stimulating its own absorption.

In addition to the use of drainage tubes, injections of warm water are made every two or three days. The patient who furnished the occasion for these remarks, had been treated by the method above described, which had proved remarkably successful. He had first come under the care of M. Gosselin two years ago at La Pitié, and appeared then in a dying condition, exhausted by a long standing empyema and thoracic fistula. As soon as free exit was afforded to the pus, and the drainage tube established, the hectic fever began to mend, the patient's strength rallied, and in three months convalescence seemed so solidly established, that the drainage tube was removed, and the man left the hospital. The flow of purulent liquid had entirely ceased. After working for about three months the patient began a second time to suffer from oppression. A fistula re-opened, and after some weeks the general health had fallen to nearly as desperate a condition as on the first occasion. Re-admitted to La Pitié, and treated again by a drainage tube, the patient again rapidly recovered. After this experience, the tube was left permanently in place. A third time he had run down in strength, and entered La Charité, but was speedily built up again by the same treatment, and thoracic injections of iodine and of sulphite of soda. It was M. Gosselin's intention to leave the drainage tube in place until the pleural cavity should be entirely obliterated. And this practice, and the theory upon which it is founded, constitute the original part of this lecture. He declares that it is absurd and chimerical to hope that a serous membrane that has undergone a pyogenic transformation, can ever regain its original character of functions. So long, therefore, as it exists, so long will there be drainage from renewed secretion of pus. But by prolonged care in carrying off the corroding secretion as it forms, the surgeon may hope for the formation of adhesions which shall definitely obliterate the cavity, and constitute the cure of the disease.

By means of these combined methods, therefore, judiciously applied, many patients, in even grave stages of hectic fever, may be snatched from the jaws of death, and restored to a tolerable degree of health: This, of course, cannot be expected if the empyema complicates advanced tuberculous disease.

M. Gosselin also applies the system of perpetual drainage to abscesses situated under the great pectoral, and whose evacuation is rendered difficult by the tonicity of the muscle. A case of this kind, actually in the ward, is doing extremely well. The tube, of course, passes through the

original and counter incision. Injections are made every two days with warm water.—*Medical Record.*

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## ON MITRAL REGURGITATION NOT ARISING FROM ORGANIC DISEASE.

In the Dublin *Quarterly Journal of Medical Science* James Cuming, M.A., M.D., Professor of Practice of Medicine, Queen's College, Belfast, Physician to the Belfast General Hospital, etc., says that the possibility of the occurrence of regurgitation, through the mitral valve, independently of organic disease of any portion of the heart, is a question of great pathological and practical interest. The recognition of the characteristic murmur of mitral regurgitation is generally, and, no doubt, in the great majority of instances, rightly regarded as indicative of serious organic disease. There is reason to believe, however, that inorganic or functional murmurs are of more frequent occurrence than has been hitherto supposed. Functional disturbance of the heart, being usually a remediable affection, there is rarely an opportunity for examining the state of the valve, except in cases in which organic disease has existed. Various observers have, however, been struck by the apparently anomalous circumstance of the left auriculo-ventricular opening and its valve being found on examination, to be perfectly healthy, in cases in which murmur, apparently caused by valvular incompetence, had been heard during life. Such cases can be accounted for only by one of two explanations,—either that a mitral murmur may be generated without regurgitation, or that derangement of the valvular function may be brought about by functional causes.

As far as regards the former of these two hypotheses, it may be taken for granted that the existence of a systolic bellows-sound, possessing the usual characters of a mitral murmur in respect of situation, maximum intensity, and direction of transmission, necessarily involves regurgitation through the left auriculo-ventricular opening. This, which is the almost universal opinion among physicians who have paid special attention to cardiac diseases, is in opposition to the opinion of no less eminent an observer than the late Dr. Todd. Todd believed that a murmur might be engendered at the mitral valve in consequence of the deposition of lymph on its ventricular surface, the competence of the valve remaining quite unaffected, and, of course, no reflux taking place into the auricle; and even held that this condition of the valve could be distinguished from a condition producing incompetence by a special modification of the auscultatory signs. This opinion of Todd has been regarded with little attention, and has not been adopted, by any considerable authority on cardiac disease. Indeed, although it is generally admitted that roughening of the

endocardium in the neighborhood of the arterial orifices may give rise to systolic murmur, it is impossible to conceive how a mitral murmur can be generated of sufficient intensity to be audible below the scapula, unless a current of blood flows through the imperfectly closed valve.

The following case bears upon the question, and has some interest in connection with it,

Case 1.—R. C., æt. 33, admitted to the General hospital, July 30th, 1867, suffering from dropsy. She was married and the mother of three children.

She had been a healthy woman until four months ago, when she was suddenly frightened, she being then advanced in pregnancy; she did not miscarry, but from that time she began to suffer from palpitation, and soon after her confinement, œdema of the lower limbs became evident. The heart symptoms and the dropsy had continued since, occasionally much relieved by treatment.

There was considerable anasarca, and she complained much of palpitation. The urine was not albuminous. A systolic bellows-murmur was audible, in placing the stethoscope over the heart, loudest at the left apex, and distinctly audible at the inferior angle of the left scapula. Its intensity diminished as the stethoscope was removed from the left apex. The heart was very often examined by the clinical class, and no doubt was entertained as to the case being one of well-marked regurgitation through the mitral valve. There was no diastolic murmur nor any bruit in the large vessels. The jugulars were somewhat turgescent, but did not pulsate, and the intensification of the second sound, pointed out by Skoda, was not observed. There was nothing remarkable in the progress of the case. It was necessary occasionally to puncture the legs and thighs to relieve the dropsy. There was much pulmonary congestion, a good deal of severe dyspnœa and distress, and she expectorated frequently small quantities of dark blood. The symptoms were ameliorated occasionally for a time, but no permanent improvement took place. She died November 1st, 1867.

The post-mortem was made under circumstances of difficulty, and only the heart could be removed. It was examined carefully; the aorta and the pulmonary and tricuspid valves were found to be perfectly healthy; the mitral valve was well formed, and quite free from any evidence of disease, except a very slight thickening, about the size of a small shot, near the free edge of its anterior flap. The circumference of the left auriculo-ventricular opening was found to be three inches and six lines; that of the right, three inches and eleven lines. The cavities seemed quite normal as regards capacity and shape, and the muscular structure of the heart was firm and well-colored. The columnæ carnæ were well develop-

ed and firm, and nothing abnormal could be discovered in the chordæ tendinæ.

It is of interest to observe that the first symptoms of ill health occurred subsequently to the patient having been frightened, the fright having taken place when she was in the pregnant state, a condition in which the nervous system is probably unusually susceptible of injurious influences of this kind. The idea naturally suggested itself, that the valvular derangement might have been caused by the strong mental impression giving rise to spasmodic action of some of the papillary muscles. The influence of mental emotion in causing spasm of so partial an extent is seen in strabismus. Instances have been observed both of continuous and of rhythmic spasm, of a nature quite as extraordinary as would be involved in such a supposition. The constantly recurring irritation of the blood entering the cavity of the ventrical might possibly bring about a constantly recurring spasmodic action.

The anasarca and congestion of the lung, which existed in this case, cannot be attributed, solely, or even mainly, to the condition of the valve. The feeble, ill-nourished, and anæmic state of the patient was, no doubt, powerfully instrumental in the production of the dropsical condition. But that there was a difficulty imposed upon the heart was shown by its firm and well-developed character of tissue. Indeed, a condition of what may be called relative hypertrophy seemed to have been induced. The heart might have been reasonably expected to share in the prevailing atrophy and wasting of the body. It was, on the contrary, an organ such as might have belonged to a strong, healthy woman. This points towards a cause having existed which kept up an abnormal stimulation of its nutrition, and renders it probable that had life been much prolonged actual hypertrophy would have been produced.

Case II.—*Mitral Regurgitation of a Temporary Kind.*—A gentleman, aged thirty-three, married for about two months, of strictly moral and temperate habits, and who had always enjoyed excellent health, was seen in consultation with Dr. Newett, of Moneyglass. He suffered from great exhaustion, and from a feeling of faintness when he sat up more than a few minutes at a time. He had injudiciously taken purgative medicine with the idea of his illness being the result of biliousness, and, in consequence, the bowels were rather relaxed. There was no evidence of active disease of any kind; the tongue was clean, pulse 80, and very soft, and there was some appetite. On examining the heart a soft bellows-murmur was heard at the left apex, transmitted towards the left axilla, but quite inaudible at the base of the heart, and only faintly audible at the right apex. He had never had any rheumatic affection, nor any symptom of cardiac disease, and he had been examined for life assurance a short

time previously by an excellent and careful stethoscopist, who had not detected any abnormal condition of the heart. Under these circumstances, the opinion was formed that the murmur was of functional origin, an opinion which was verified by the progress of the case, as under tonic treatment and rest he completely regained his strength, and the murmur gradually subsided. A subsequent examination of the heart showed that its action and sounds were perfectly normal, and free from any trace of murmur.

The conclusions to which a consideration of the last two cases and observations lead are—firstly, that mitral regurgitation may be produced without organic disease of any kind, and, secondly, that it may in some instances give rise to the same physical signs and to the same general symptoms as regurgitation from organic causes.—*Dublin Medical Press and Circular.*

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## THERAPEUTIC ACTION OF DIGITALIS

Edward Mackey, M. B., Joint Professor of Mat. Med., Queen's College, Birmingham (*British Medical Journal,*), reports clinical observation of the use of digitalis with cases. In reply to the question may we expect digitalis to strengthen, and make regular a feeble beating heart, or must we dread its depressing pulsation to the verge of extinction? He says, "We may expect the former in a large number of cases." Quoting opinions, he states "that Dr. Gull's clinical experience, clearly settled in his own mind, that digitalis was capable of diminishing the frequency of the heart's beat, and increasing the power of the heart's impulse; and is especially useful in cases of disease of the left side, in which the action is very rapid and feeble." Dr. Wilks remarks of a case of dilated enfeebled heart: "This was just one of those cases where digitalis might be expected to do good." Dr. Fuller says, "The cases of heart disease most benefited by digitalis, have been those in which the heart has been weak and dilated, pulse feeble and irregular." *Effects of Complication.* (*a.*) A state of fatty degeneration, if far advanded, contra-indicates its use; for its subject is liable to sudden death. In dubious cases, commence with small doses (5 m.), better combine with ether, watch carefully; increase gradually; stop occasionally. (*b.* and *c.*) Mitral regurgitation and mitral obstruction do not contra-indicate its use. (*d.*) Aortic regurgitation is a contra-indication. Dr. Mackey does not think, from the experience of the profession, although the reasoning is not clear, it is prudent in this condition to use the drug. (*e.*) In aortic obstruction, however, this remedy may be most useful. (*f.*) Hypertrophy, as a result must be referred to other lesions for its indications. This drug is not

likely to benefit functional disorders, palpitation, etc. As to *preparations*, Digitaline is uncertain; the infusion is apt to nauseate. In preparing the tincture, great care should be used in the selection and keeping of the leaves. Doses: It is better to commence with small doses (5 m to 10 m); sometimes the dose can be rapidly increased to 30 m. As a general rule, such a dose is often enough repeated twice in the twenty-four hours.—*Half-Yearly Compendium.—Medical Science.*

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## TREATMENT OF DISEASES OF THE HEART.

Dr. S. O. Habershon, in an interesting paper in the volume of *Guy's Hospital Reports*, lays down *seven* principles of treatment in all cases of heart disease.

The first is, as far as possible, *to lessen its work*; and this may, to some extent, be effected by mechanical rest, by a recumbent position, and by the avoidance of sudden changes of temperature.

The *second* is to *insure regularity of action*, by avoiding mental excitement, by guarding against indigestion, and by never allowing constipation to continue.

The *third* is to *lessen distension*, especially the right side of the heart, by purgatives, diuretics, and by mechanically diminishing the quantity of fluid in circulation.

The *fourth* is the prevention of syncope. With this view, sudden muscular movements must be avoided; stimulants may be required, as ammonia, brandy, etc.; and sedatives must be withheld or cautiously administered.

The *fifth* is to strengthen the muscular fibres of the heart, by suitable nourishment, a bracing air, if other conditions allow; chalybeate medicines, and if the patient be exhausted by want of sleep, this symptom must, if possible, be relieved.

The *sixth* is to prevent fibrillation of the blood. For this purpose carbonate of ammonia will often be useful; other alkalies, as potash, soda, and their salts may be beneficial, but, if long continued in considerable doses, Dr. H. says, they depress the action of the heart. The acetate and iodide of potash may be advantageously combined with the carbonate of ammonia, or perhaps the hydro-chlorate of ammonia.

The *seventh* is to prevent secondary complications, and to relieve them when produced. These complications are—1st, broncho-pneumonia and pleuritic effusion; 2d. pulmonary apoplexy and other hæmorrhages; 3d, visceral engorgement, hepatic and renal congestions, with ascites and anasarca. By freely acting on the bowels, the portal congestion is greatly diminished, and the liver is enabled to act in a normal manner. Thus a

free mercurial purge is of great value. The kidneys may be excited to a more vigorous action by a combination of mercurial medicine with squill and with digitalis, when the latter can be borne. Salivation should be avoided. Diuretics are useful. An effectual way of diminishing the anasarca is by puncturing the skin on the thighs. The pulmonary engorgement is sometimes greatly reduced by applying cupping-glasses between the shoulders, or by the application of a blister to the chest.—*Rankin's Abstract*

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## A CASE OF LONG STANDING EPILEPSY, CURED BY AN EXTENSIVE BURN.

By John C. Pearson, M.D., of Ursa, Illinois.

In the month of January, 1864, I was called on, to see Joseph Garing, a German, who had had an epileptic fit and fallen in the fire, burning himself severely.

I found my patient in the most excruciating agony. He had stirred up a large bed of live coals in an extensive old-fashioned fire place and fallen into them in a fit; being alone in the room at the time was dreadfully burned in the hands, arms, face, neck, breast and head before assistance fortunately came in.

I administered opium and stimulants freely, and dressed the whole burnt surface with a liniment composed of lime water and linseed oil. Five weeks elapsed before the entire burnt surface had healed. It supurated during this period, profusely, and the fetor arising from it was almost insupportable.

My patient, at that time about forty years of age, had been the subject of epileptic convulsions from early boyhood, rarely going two or three months without the recurrence of a fit, and sometimes having one every few days. This was the case anterior to the burning; but since that great and—as the sequel has proved—*fortunate* event in his life, *he has not, up to the present time, experienced the slightest symptom of an epileptic spasm!* Four years have passed away, and not a single fit has returned.

Now I would ask the question, what was it that caused this permanent cure of a disease of over thirty years standing? Evidently the burn in some way was the therapeutic agent, but what was the *rationale* of its action? Was the burn *directly* the cause of the cure by the shock it induced upon the system, or *indirectly* the cause by the excessive and long continued suppuration it produced?

The burn evidently and doubtless was, in some way, the cause of the cessation of paroxysms, for subsequently to its reception, my patient has had no medication whatever.

Prior to the burn, Garing would occasionally indulge in the free use of spirituous liquors, which indulgence was invariably followed by a severe epileptic fit, but now he can get as drunk as Bacchus without the least symptoms of any such result. This fact he regards as the crucial test, and is glad that he was burned.—*Philadelphia Medical and Surgical Reporter.*

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## BROMIDE OF POTASSIUM IN LARYNGISMUS STRIDULUS.

Dr. B. F. Dawson, Lecturer on Uterine Pathology in the Medical Department of the University of New York, has the following useful article in the *Am. Jour. of Obstetrics.*

That the bromide of potassium is a valuable remedy for many diseases having their origin in some affection of the nervous system, is acknowledged almost universally.

It was on account of this acknowledged power which it possesses over spasmodic affections that I was induced to use it in the following case of *spasm of the glottis.*

About the 10th November, 1868, a little boy not quite four years old was brought to me by his mother, suffering from what she thought must be "croup." She stated on interrogation, that about six months ago she first noticed that her child would occasionally be seized, whilst asleep, with a difficulty in breathing which would last but a few moments, and then the child would sleep as naturally as before. These attacks occurred in the beginning about once or twice a week, and remedies which she used gave no relief whatever; for at the end of four months the attacks had increased in frequency and severity, and often she thought the child would choke to death. During these attacks he would jump up in bed and stretch out his neck in his efforts to obtain breath, and his breathing was so loud as to be heard throughout the house. The spasm generally lasted but a few minutes. In this state he continued up to the present time, the paroxysms returning nightly for the last month, and no relief being obtained from the remedies used. In other respects, the child was quite well; he ate regularly, and was only allowed simple nutritious food, as had been ordered by her physician. His bowels were regular, and in the daytime he was as playful and bright as any child of his age. Examination of the child's head, chest, throat, mouth, etc., revealed nothing to account for the disease, and I therefore considered the case one of "Spasm of the Glottis," due to some one of the *many* nervous influences which sometimes give rise to this affection, but as to what was the particular influence inducing it, I was unable to discover. With this opinion as to the disease and its cause, I was desirous of trying what effect the bro-

mide of potassium would exert over these paroxysmal spasms, and accordingly to this end I ordered the child ten grains of the salt every hour, from eight to ten P. M., the same dose to be repeated at the same hour for three nights, at the end of which time the child was again to be brought to me. I was not a little surprised to learn at the end of this time that the child had not the slightest return of the "spasm" from the first night the bromide was taken, and that its sleep and breathing were exceedingly easy. As the disease was evidently impressed by the prescribed treatment, I directed a continuance of the salt in the same doses for two nights more, after which time but one dose was to be given on going to bed, for two nights only, and the medicine was then to be dispensed with altogether. These directions the mother carefully followed, and for the last five nights the child has had no medicine whatever, but notwithstanding has not had the slightest return of the disease.

From the foregoing facts it is therefore evident that in this case the bromide of potassium certainly must have the credit of at least temporarily relieving an obstinate and dangerous affection, and although it is not safe as yet to consider the disease as cured, yet I may safely believe that the paroxysms have been completely broken, for a time at least, by its action, and there is all likelihood that they will not return for some time; and when they do recur I may confidently rely upon the bromide of potassium as a powerful means for at once warding them off. The interest attached to this case is, that I do not know of any case of laryngismus stridulus in which the bromide of potassium has been used, and that consequently we may possibly find it a valuable agent in this disease; and as this salt is known to be efficacious over certain spasmodic or reflex actions, may not this disease, when due to nerve lesions, be made to yield under its judicious and persevering use? Its power, at least, is worth trial, and the above case I shall watch carefully, and rely solely on the bromide of potassium so long as I find it makes an impression on the disease.

It would not be out of place to mention that Dr. J. Russell Reynolds (*The Practitioner*, July, 1868), in a paper on the use of the bromide of potassium in spasmodic affections says: That its efficacy is most marked when the malady is "paroxysmal;" and, according to Dr. Pletger's observations (*Deutsche Klinik*, No. 10, 1868), "it excels all other drugs as a remedy for spasms and excessive reflex action of the nervous centres."

It may be quite probable that the effect of the bromide of potassium in the case cited above, was simply due to the *anæsthesia* it produces when given in larga doses, as was done in this case, and not to any direct impression on the cerebral or ganglionic systems.

## ATROPIA AS AN ANTIDOTE TO OPIUM POISONING.

Dr. M. S. Buttles relates (*Med. Record*) the following case occuring in his practice, which shows the value of belladonna in cases of poisoning by opium:—"Mrs. W. aged 38, had been troubled with retroversion, perimetritis, and severe endometritis, and has had several severe attacks of pericarditis, which have left extensive adhesions. Had severe neuralgic pains all along the left side, for which I had been in the habit of giving her subcutaneous injection of gr. ss morphiæ sulphatis. On January 20th last, I gave her one of these hypodermic injections, which gave but slight relief; the next morning I repeated it injecting exactly M. xv. Magendie's solution (equal to gr. ss morphiæ and remained in the room fifteen or twenty minutes, when she seemed a little easier, and I retired to my office down stairs; but was very soon summoned by the nurse,who stated that Mrs. W. was dying. I found her lips purple, the respiration seven per minute, no pulse at the wrist, but one sound at the heart; pupils contracted to a fine point, frothing at the mouth, and the extremities cold. I commenced artificial respiration (for while I was cogitating on my handiwork she entirely stopped breathing), which by myself and assistants was kept up for about half an hour, when I attempted to give her some strong coffee, but she could not be made to swallow. I had sent for several neighbouring physicians, who were all out; but just at this moment my friend, Prof. Chas. A. Budd, providentially called on me, and was immediately shown to the room. He declared that she was dead, and 'laughed in his sleeve' at the idea of keeping up artificial respiration. By this time I began to think of sending for an undertaker (for she had come to me from a neighbouring city for treatment), but as a 'drowning man clings to a straw,' so I was eager to give her every possible chance, and asked Dr. Budd to suggest something, at the same time mentioning belladonna, when he said that atropia might be given hypodermically, if I wanted to do something, but as she was dead it would not bring her round. We resolved, however, to try it. By this time artificial respiration had been kept up for an hour and a half. One-sixtieth of a grain of the sulphate of atropia was injected, and in fifteen minutes she showed signs of life, the pupils began very slightly to dilate, and in ten minutes more she began to breathe, and the respirations rose to twelve per minute; in half an hour we repeated the dose, making in all one thirtieth of a grain of atropia; and in about fifty minutes from the time of giving her the first injection, she returned to consciousness, and is living now, with a blank in her life of two and a half hours. To Prof. Budd is due the credit of suggesting the remedy. *Philadelphia Medical Record,*

# Midwifery and Diseases of Women and Children.

## TREATMENT OF THE SICK STOMACH OF PREGNANCY.

Extracts from a Paper read by Dr. W. Forwood, before the Medical Society of Hartford County, Md.

The treatment of the sick stomach of pregnancy, or "morning sickness," as it is usually denominated, does not engage the attention of physicians to the extent of its importance.

Our attention has of late been particularly drawn to this distressing malady, by an article which appeared in the *London Lancet*, Feb, 22, 1868, and was copied into the April number of the *Medical News and Library*, detailing the various methods of treatment practiced in some of the leading hospitals of London.

The *Lancet* says the plan of treatment which Dr. Greenhalgh, of St. Bartholomew's Hospital, has found most successful consists of rest in a semi-recumbent position, especially after meals, which should consist of bland, nutritious and unstimulating food, frequently administered, and in small quantities. The patient should take a little coffee about a quarter of an hour before rising, and should guard against long fasts.

Great attention must be paid to the bowels. In some cases a slight bandage around the lower ribs, and under this a strong sedative application over the epigastrium, appear to have done good. Effervescents, with hydrocyanic acid, belladonna, or nox vomica, and in some cases lemon juice, have proved useful. Bismuth and charcoal, when there have been large secretions of acrid mucus, accompanied with flatulent eructations, have appeared serviceable. But of all remedies, Dr. Greenhalgh places most reliance upon the introduction into the vagina of morphia suppositories, more especially in severe cases and when an irritable condition, with or without an abrasion of the cervix uteri, is found to exist. In such cases, he believes, little or no reliance can be placed upon remedies by the mouth, which he has found rather to aggravate than to relieve the vomiting. * * * * * * *

Dr. Greenhalgh recommends from one and a half to two grains of morphia, as the usual strength of the suppository; but in cases where there is an abrasian, with little secretion, care should be taken against an overdose.

Dr. Graily Hewitt, of the University College Hospital, says that the "morning sickness" of pregnancy, when limited to the morning and early part of the day, rarely calls for energetic or complicated medication. Under such circumstances he generally finds benefit derivable from giving the patient some nourishing article of diet, a cup of milk,

&c., before raising the head from the pillow. The change of posture from the recumbent to the upright position appears to excite the attack when the stomach is empty, but not so much so when the attention of the organ is, so to speak, otherwise occupied. The patient should remain a few minutes or longer in bed after this early meal before attempting to rise. That the sickness will occur in spite of this, in some cases, is undeniable; but in very many instances Dr. Graily Hewitt finds notable relief given by the simple treatment just mentioned.

Dr. Playfair, of King's County Hospital, is not in the habit of treating cases of "morning sickness" much, unless it is unusually severe, beyond carefully regulating the diet, and removing any obvious source of irritation to be met with in the primæ viæ themselves. He is of opinion that there is much truth in the old belief that pregnancies without morning sickness are not, as a rule, favorable. He has so frequently noticed that when sickness is entirely absent other and more distressing reflex phenomena, such as syncope, exist to an unusual degree, that he his disposed to look upon the entire absence of nausea as unfavorable. When morning sickness is excessive, he has frequently verified the opinion of Dr. Clay and others, that there is some morbid condition of the uterus itself, and he has found local treatment, such as the occasional aplication of leeches to the vulva, or of iodine paint to erosions of the cervix uteri, to be of great service. With regard to actual medicines he is disposed to place most reliance on the oxalate of cerium, in doses of two grains three times a day. Next to this, effervescing draughts, with hydrocyanic acid, ice for suction *ad libitum* and the subcutaneous injection of morphia, seemed to have answered the best. The pyroxalic spirit, strongly recommended in a late volume of the "Obstetrical Transactions" has not been found to answer so well as was expected.

At the British Lying-in Hospital, the vomiting of pregnancy, purely resulting from sympathetic irritation, and not due to ulceration or some morbid condition of the uterus during gestation, has been treated by Dr, Murray in the following way: In the sickness occuring in the morning, and even before rising from bed, one teaspoonful of sal volatile, in water, has proved useful. When nausea occurs several times during the day he recommends the use of sinapisms to the epigastric region, with a pill containing the oxalate of cerium and camphor, to be taken twice or thrice daily. In one or two cases he has found the morning nausea stayed by getting the patient to eat either a biscuit or sandwich sometime during the night, or very early in the morning. Salacine is a drug which he has used with success. Opium and ice are other agents of much value in certain cases. In the cardialgia of pregnancy great attention should be paid to the diet, which should be light and nutritious, and a small

quantity of food taken at a time, and at short intervals. He recommend lime water in preference to soda water, to be taken with almost every drink: and has found nitro-muriatic acid, with some bitter infusion, very useful.

Dr. Meadows, of the Hospital for Women, Soho Square, has found greatest success from medicines which exercise a decidely sedative action upon the nerves of the stomach. Regarding the sickness of pregnancy as a purely reflex effect of uterine irritation upon the pneumogastric nerves and solar plexus, Dr. Meadows places most reliance on drugs which diminish the sensibility of those nerves in their principle distribution. The tincture of aconite, in five or ten minim doses, the tinture of belladonna, in ten minim doses, or the dilute hydrocyanic acid in five minim doses—one or other of these—is the remedy which he most commonly and most successfully prescribes. He has also observed marked effects from the oxalate of cerium, or the citrate of bismuth in five-grain doses. In very intractable cases he has tried, with good effect, a small blister, about the size of a florin, over the epigartric region, the blistered surface being afterwards dressed with some dilute savin ointment, containing one grain of morphia to a drachm.

The foregoing extracts, representing as they do the views of several of the leading practitioners of London, regarding the treatment of "morning sickness," contain many valuable suggestions, which may be profited by in certain cases, and represent very accurately, we believe, the opinions entertained by the profession at large. They contain also some views which we think open to criticism, but it is not our present purpose to make any remarks upon the theories or practices of others.

It will be observed that the treatment recommended by each practitioner cited, appears to have reference exclusively to the manifest symptom—the nausea—the remedies advised can only be regarded as affording temporary alleviation, without removing the disordered condition of the functions of the digestive organs, which so frequently supervenes as a result of pregnancy, and which appears to be the chief cause of the malady under consideration. Having frequently been applied to, by pregnant women, for the relief of sick stomach, and almost as often experiencing the mortification which results from the failure of prescriptions, my attention was called by a professional friend, about twelve years ago, to a prescription recommended by prof. Wood, in the *United States Dispensatory*, under the head of "Columbo." Speaking of the medicinal uses of Columbo, Professor Wood says: "It has been highly recommended in vomiting, unconnected with inflammation of the stomach, as in the sickness of pregnant women. It is frequently administered in combination with other tonics, aromatics, mild cathartics and ant-acids. The remedy which

we have found most effectual in the permanent cure of a disposition to the accumulation of flatus in the bowels," he continues, "is an infusion made with half an ounce of columbo, half an ounce of ginger, a drachm of senna, and a pint of boiling water, and given in the dose of a wine glassful three times a day."

We have prescribed this remedy in this complaint for the last twelve years, always with benefit, and in perhaps nine cases out of every ten as affording complete relief to all the distressing symptoms.

For several years we have prescribed the roots and leaves in the crude state, simply contused, but latterly we have found the *powders* of each of the articles much more efficient, for the reason that their properties are more readily extracted in infusion.

The senna may be increased or diminished in quantity, or altogether omitted, as may be required by the condition of the bowels. Of course it is necessary, in hot weather, to keep the infusion in a cool place, or to have a smaller quantity prepared at a time. The addition of a teaspoonful of brandy or whiskey, to the pint, will preserve the infusion, and will be found in some cases. a valuable adjuvant. In cases of distressing cardialgia we also add, with marked advantage, a half a drachm or drachm of carbonate of magnesia.

The taste of the infusion is bitter, and to many it is very disagreable, but as the bowels are freely acted upon, and some tone given to the stomach, the majority of patients lose their aversiou to the medicine, and in a short time a good apetite and good digestion follows; the desponding and prostrated patient becomes cheerful and robust, and the feelings of weariness of life give way to greater present enjoyment, and to happier anticipations.

We generally prescribe two parcels of powders, enough to prepare two pints of the infusion, (one at a time,) to be taken continuously, a wine glassful, half an hour before each meal, until the supply is all used. This quantity, in the majority of instances, is all that is required to effect a cure; but not unfrequently an additional powder is needed, if not at once, perhaps in the course of three or four weeks, at which time there is a tendency in some individuals to a return of the complaint.

As before stated we have been in the regular practice of administering this infusion to all cases of "morning sickness." that have come under our notice during the last twelve years—numbering perhaps two hundred, or more—and such has been our uniform success, that we will remark, in closing, though the expression may appear extravagant, that we regard the columbo, ginger and senna infusion as much entitled to the character of a specific in the treatment of the sick stomach of pregnancy, as quinine is in the treatment of intermittent fever. We hope the profession will give the remedy a trial, and report the results.—*Medical Bulletin*

# Canada Medical Journal.

MONTREAL, APRIL, 1869.

## TO OUR SUBSCRIBERS.

We have to apologise for the late appearance of this number of the Journal. The printers of Montreal struck for higher wages—about the the middle of April, and at the time we go to press no compromise has been effected—and the lock out continues. As may be imagined, it has been a work of some difficulty to get matter set. Our readers will, therefore, have to bear with us while this unsatisfactory state of things continues.

We would request our Subscribers to forward us communications. There is a sad want of energy among the professiou in Canada to write out the results of their experience.

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(*To the Editors of the Canada Medical Journal.*)

GENTLEMEN,—I beg to enclose a copy of Resolutions passed at a meeting of the Medical Practitioners of Ottawa, held in the City Hall, on the 21st April, Dr. Van Courtland in the Chair.

1. Moved by Dr. Leggo, seconded by Dr. Garvey:

That in the opinion of this meeting, the Medical Act of 1865, as well as the amended Medical Act, entirely fail to afford any protection to the profession or guarantee to the public that their interests will be secured.

2. Moved by Dr. Henry, seconded by Dr. Sweetland:

That in the opinion of this meeting, a petition should be presented to the Ontario Legislature, to secure the repeal of the clauses appended to the 8th Section of the amended Medical Act.

I remain, Gentlemen, your obedient servant,

WALTER J. HENRY, M.D., *Secretary*.

Kent Street, Ottawa, April 22, 1869.

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## ONTARIO MEDICAL COUNCIL.

A special meeting of the Medical Council of Ontario, for the purpose of passing the by-law regulating the mode of holding elections in accordance with the provisions of the new Act, appointing a Board of Examiners, &c., was held at Toronto on the 6th April, in the County Council

Chamber. There were present Dr. Grant, President of the Council; Drs. Berryman, Toronto; Clarke, Guelph; Sullivan, Kingston; Lavelle, Kingston; Dickson, Kingston; Askin, Chatham; Aikens, Toronto; Morton, Bradford; Brouse, Prescott; Fulton, Fingall; McGill, Oshawa; Patullo, Brampton; and Dewar.

Dr. STRANGE acted as Secretary.

Dr. GRANT occupied the chair, and, in opening the proceedings, said—As you are doubtless fully aware, this is the final meeting of the Medical Council under the old Medical Bill, and a new state of affairs is about to be introduced. During the three years that have elapsed since the first organization of this Council, some small degree of good has, no doubt, resulted from the meetings in various parts of the Province of Ontario. Medical men have thus been enabled to know and understand each other better in many respects, and the very interchange of thought and friendly association, has tended to subvert the Shakspearian idea that we are the "jealous members of the conjectural art." We live in an age of progress, and an age of advancement in many respects; and in a new Dominion, such as Canada, radical changes, even of a medical nature, must be very gradually introduced. In the process of medical advancement difficulties unforeseen arise in everything pertaining to legislative enactment. However during the term of office which has now elapsed, we can, without fear of contradiction, assert that some good results have, so far, arisen out of our labours. A uniform system of matriculation for medical students has become law—and on this point the members of the Council have had ample proof of the beneficial results likely to accrue from closer attention to preliminary education. The youth of our country have ample opportunities, which, when properly embraced, seldom fail to give that place of distinction they occupy in competitive examination. Again, the new Medical Bill of the College of Physicians and Surgeons of Ontario, compels those students who study at each of the Medical Colleges in Ontario to undergo examinations, equal in every respect as to test of ability and efficiency. No one body will be dealt with to the detriment of the other. No distinction will be known, but that arising from mental capacity and proficience in medical study. He felt satisfied that when the students were well grounded in the chief branches of medical education, and were obliged to pass through a proper curriculum, many would be added to the ranks of our noble profession. The chief object of the present meeting was to frame a by-law for the new elections to take place in June next, and he trusted that, whoever their successors to office might be, they would, when chosen by the body of the profession, exercise their best endeavours to make the medical pro-

fession occupy a place of power, of pride, and of distinction in the Dominion. (Cheers.)

Dr. CLARKE, of Guelph, suggested that several Homœopathists who were outside the bar should take their place along with the members of Council.

Dr. CAMPBELL, as representing the Homœopathists, objected to take his place at the Council Board; but made a few remarks to the effect that, seeing the body he represented were so comparatively few in number, his idea was, that instead of dividing the Province into electoral districts, the whole body should vote as one constituency; and also, as they were so widely scattered, he would suggest that the voting should be done by ballot. The voting paper could be sent to the scrutineer of the Council, and thus the whole meaning of the Act would be implemented.

### READING THE MINUTES.

The Secretary, Dr. Strange, read the minutes of the last meeting of Council, and these were adopted.

### COMMUNICATIONS

Were read from the Warden of the County of York, from the Medical Faculty of Victoria College, and from the Registrar of the Medical Council of England—the latter communication having reference to the matriculating standard of students.

### HOMŒOPATHICS AND ECLECTICS.

Dr. PATULLO moved to the effect that the Homœopathists and Eclectics be requested to meet the Council to-morrow, in order to submit their by-laws, consonant with the requirements of the Act. After a brief discussion, the motion was withdrawn.

### MEDICAL BILL.

The Committee appointed to procure amendments to the Medical Bill reported:—That after a protracted attendance before the Legislative Assembly of Ontario, and against the strongest opposition from various sources, they succeeded in procuring the passage of the new Bill which they believe embodies all the amendments which they were directed by the Council to procure, with other amendments and improvements which they believe will be of the utmost benefit to the whole profession, and will also be satisfactory to the public.

On the motion of Dr. CLARKE, seconded by Dr. BROUSE, the report was adopted unanimously.

### THE NEW BY-LAW.

It was moved by Dr. BROUSE, seconded by Dr. AIKENS, that a special committee consisting of Drs. Clarke, Dickson and the President be ap-

pointed to draft a by-law for the election as contemplated by the new medical Act, to be submitted at the next meeting of this Council—Carried.

THE MEDICAL BILL.

It was moved that the new medical Act be read over clause by clause. This having been done by the Secretary, a rather lively discussion followed, as to the phraseology of the Bill.

Dr. LAVELLE pointed out many inaccuracies which existed in many of the clauses, which he imputed to the haste with which the Bill had been pushed through the House, and from these inaccuracies, he looked for nothing but trouble. The thing he considered had been forcibly taken out of the hands of the committee appointed by the Council and manipulated by certain parties who were not capable at all of doing the work they so eagerly took in hand.

Dr. BERRYMAN pointed out that according to the Bill, every man who practices medicine for money, or the hope of gain, is liable to a fine of $100 for each occasion.

Dr. CLARKE, in a forcible speech, denied any manipulation of the Bill, and spurned the idea that he had any other purpose in taking so earnest an interest in the passing of the Bill than the good of the community. A few clerical errors had crept into the Bill; but these are not worth a moment's discussion. The great principles involved in the Bill had received the commendation of the *Lancet* and the highest medical authorities in England, and by these it was considered that the Province of Ontario stood in the very vanguard of medical reform. True, they objected to the admission of the Homœopathists and Eclectics into their brotherhood; but they were not aware that these schools stood on equal footing with them, and it would have been an act of gross injustice on their part. He had now little to look for from the profession; but it was gratifying to him in his old age to think, that along with the Council, he had been so far instrumental in conveying a legacy to the medical profession, which a few years ago none of them would have for a moment dared to anticipate.

Dr. BROUSE remarked that Dr. Lavelle should be a little more explicit to the Council. If he had no objections to the Bill but the small matters referred to, he virtually accepted the Bill in its entirety. Has Dr. Lavelle any real objection to the principle of the Bill? If so, we are ready to hear them and to meet him in his objections.

Dr. LAVELLE stated in reply that he was quite serious in the remarks he had made. It was his conviction that by the stupidly constructed clauses of the Bill, difficulties would arise, and he was convinced that ac-

cording to the Act the Homœopathists and Eclectics would rule this Council. He likewise denounced the introduction of the last part of clause 8. The Committee had no authority to introduce such a clause. In fact it had been condemned not only by the Council, but by the whole medical profession.

Dr. BROUSE deprecated any division amongst the medical men of the Province over the Act. The Act was good in principle and if some minor errors had crept in, let them be ignored in their emulation to give it a full and fair trial.

Dr. AIKENS sympathized with the remarks of Dr. Lavelle. He would always regard the Bill as incomplete and faulty so long as the clause referred to was in it. However, he regarded the Bill as a whole, a great boon to the public and it was their duty to give it a full and fair trial, having always in view the good of the public.

Dr. DICKSON spoke generally in favour of the Bill, but demurred to several remarks made regarding Kingston students. These were taking their places side by side with the graduates of much more ambitious institutions and as he watched their progress in the Army and Navy, he thought members of the Council should not look lightly either on them or the institution which sent them out.

The PRESIDENT was glad to hear the tone that characterized the debate. As one of the Committee on the Bill, he denied all sectarian or Provincial prejudices in the matter of McGill College. They had no purpose to obstruct that respectable institution. It was too small an idea altogether that they had such a purpose. The whole aim of the Committee and promoters was to elevate the standard of the medical profession throughout the Dominion and through them to confer advantages on the public generally.

Drs. DEWAR and BERRYMAN having defended the Bill and the action of the Committee,

Dr. MCGILL in a lengthened speech defended the Bill in all its bearings and especially the latter part of clause 8. And he wondered to hear Dr. Lavelle speaking as he did of that amendment.

Dr. Lavelle maintained that the amendment had been, so to speak, "sprung upon" the House by Mr. Ryckart. He was in the House that night and had never heard of it till it was introduced.

Dr. MCGILL thought that Dr. Lavelle had rather "sprung" himself upon the house. He was not a member of the committee, and had really no business there; neither had the committee any reason to consult him on the matter. He saw no harm in the clause, and he regarded the Bill as a noble effort, fitted to accomplish noble ends.

Dr. FULTON said that though he was excluded by the measure from being a member of the Council, still he regarded the Bill, even in the part that affected him, as a most judicious measure, and one which had received the commendation of the whole profession.

VOTE OF THANKS.

It was moved by Dr. BERRYMAN, seconded by Dr. AIKENS, that the cordial thanks of this Council be tendered to Dr. McGill and the other members of the committee for their assiduity in conducting the measure through the House of Legislature. Carried.

It was then moved by Dr. DEWAR, that the warmest thanks of the Council be accorded to Mr. Ryckart for the indefatigable efforts he had used as Chairman of the Medical Bill Committee towards the construction and passing of the measure, and that the Registrar of the Council be instructed to convey a copy of the motion to Mr. Ryckart. Carried.

The Council then adjourned till next day at 10 a m.

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## MEDICAL COUNCIL OF ONTARIO.

*Wednesday, 7th April.*

The Council resumed their sittings at 10 o'clock. Dr. Grant in the chair.

READING THE MINUTES.

The minutes of Tuesday's Session were read by the Secretary and adopted.

Dr. RICHARDSON gave notice that, in the afternoon, he would make a motion condemnatory of the amendments introduced into the Medical Bill.

THE BY-LAW RESPECTING ELECTIONS.

Dr. BROUSE submitted the by-law drafted by the Special Committee appointed for that purpose. As the by-law had not yet received the sanction of the Committee, it was moved by Dr. Brouse, and seconded by Dr. Fulton, that the Council go into a Committee of the Whole to discuss the draft, in order that the Special Committee might ascertain the views of the Council on several changes which it was proposed to introduce into the method of making the elections. The motion was agreed to. The Council went into Committee, Dr. Morton in the chair.

Dr. CLARKE moved that the clause in the draft by-law relative to "nominations" be struck out. The motion was seconded by Dr. Brouse and carried.

Dr. CLARKE suggested that voting should be done by voting papers; and, in the course of his remarks, said he had not intended to enter the

Council again, but he was resolved to be a candidate once more, for no other purpose than to test the opinion of the medical men of his division on the opinion they hold of him as one who had taken an active and conspicuous part in the framing and passing of the new Medical Act. A long and desultory discussion on this and other points ensued, and the result was that the draft bill was all but annihilated, and the Special Committee were requested to frame a by-law more in accordance with the views of the members of the Council. The Council then adjourned till 3 o'clock.

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*Afternoon Sederunt.*

The Council resumed at 3 o'clock, and the by-law was laid before the Council.

The Council again went into committee—Dr. Morton in the chair. In the course of discussing the by-law, it was moved, in amendment to clause three, by Dr. Pattullo, seconded by Dr. Tarquand—"That nominations be held in each electoral division previous to each election." The amendment was lost.

Relative to the remuneration of Returning Officers, a remarkably lively discussion occurred. One party strongly advocated a fee of $5, and another section as strongly advocated a fee of $10. Dr. Berryman, seconded by Dr. Clarke, moved a $10 fee; and Dr. Askin, seconded by Dr. McGill, moved a $5. The latter was carried by a majority of one.

THE HOMŒOPATHIC BY-LAW.

At this stage, the Homœopathic section of the general by-law having been handed in, it was moved by Dr. Richardson, seconded by Dr. Askin—"That this Council declines to interfere in the arrangements for the election of any of the members of the Council, excepting those who represent the regular profession."

Dr. McGILL had anticipated such a move, and he looked upon it as a direct insult to every one who had taken part in the passing of the new measure, and he hoped the Council would show its indignation at such a course. He looked upon the attempt of Dr. Richardson as foolish; contemptible in the highest degree—thus to brave both the Legislature and the people of Ontario.

Dr. RICHARDSON came here determined to show his thorough opposition to the Medical Bill, and he would take every opportunity to show that opposition. He cared nothing for the assertion that the Bill, was popular. He regarded the right, and the right he would follow, whether popular or no.

Dr. CLARKE said it was only Toronto men who were leading in this movement, and they knew the reason why. As a physician who stood high in his profession, he would say this—"If Homœopathy is right in principle, let Homœopathy be accepted."

The vote being taken, the motion was lost, only Drs. Richardson, Askin and Aikens voting for it.

It was then moved by Dr. Brouse, seconded by Dr. Grant—"That in order to dispose of their own by-law, before touching the other, the Committee rise and report progress on the first by-law." Carried.

Dr. Grant having resumed the chair, the by-law was read a third time and passed.

THE HOMŒOPATHIC BY-LAW.

This by-law was read a first time, when Drs. Richardson and Askin again protested against interfering with the by-law. It was none of their business, and the by-law now read seemed to embrace a great deal more than the appointing of the "manner and place" of conducting elections; and it was moved by those gentlemen that "as this Council have nothing to do with the elections of the Homœopathists and Eclectics, the arrangement as to the election of members from those boards be left in the hands of the Governor in Council.

Drs. Clark and McGill made vigorous and lengthened speeches, the gist of which was to the effect, that they must act in accordance with the requirements of the Bill. On a division the motion was lost by 10 to

The Bill was then read a second time, and the Council went into Committee, Dr. Lavelle in the chair.

Dr. Richardson moved, seconded by Dr. Askin, that the part of the by-law defining "who are" and "who are not" qualified electors, should be omitted. Carried.

Subsequently a long and desultory discussion ensued, on several of the other clauses comprehended in the draft by-law, particularly as to the necessity of the members of the Homœopathic and Eclectic Schools being freed from any notarial proof of their being *bona fide* electors, and their paying a fee of only $5. The clauses including these provisions were expunged. In the course of the discussion on these clauses the President of the Council said that he was prepared to go a long way, and had gone a long way in meeting the views of the members of the Homœopathic and Eclectic Schools—in fact, had gone so far, that those of the Council who were attached to the Universities of Britain ran the risk of having their names expunged altogether from the rolls of these Universities—yet he was unwilling to go further. Since they were to come amongst them, they must come in on an equal footing with them, without asking any favours,

which the school to which he belonged, neither enjoyed nor asked to enjoy.

It was then moved that the Committee rise and the Chairman report progress.

Dr. MORTON took the chair, and the Council adjourned till this morning at 10 o'clock.

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*Thursday, 8th April.*

The Council resumed its sitting this morning at 10:30. Dr. Grant in the chair.

The roll having been called, and the minutes read and adopted, the Council resumed consideration of the

BY-LAWS.

A short discussion ensued as to whether the returning officers in the electoral districts should have a vote, irrespective of the casting vote referred to in the by-law; but the Chairman ruled the discussion out of order.

PETITIONS AND COMMUNICATIONS.

A petition was read from the Hamilton Medical Institute, asking the Council to take measures towards the carrying out of the measures of the new Act relative to illegal practitioners.

A communication was read from the Medical Section of the Canadian Institute.

MOTIONS.

Dr. BROUSE moved that the communication from the Canadian Institute lie on the table.

Dr. CLARKE regretted that he did not hear the discussion in the Canadian Institute for he thought the gentlemen who passed the resolution were acting hastily. It was not to be understood that he was at all tending to Homœopathy. He ignored the theory with all his heart, and dispised the greater number of its practitioners. He believed them to be specious quacks. Instead of passing such a resolution as this, the medical men of Toronto ought to go to the old woman Matthew Crooks Cameron, who had done more than any other man to introduce this element into the Bill, and ask him to "get out of that." It was a fact that nearly half of the members of the Legislature were Homœopathists; and it was folly to attempt to eliminate the clause without destroying the whole Bill. He would like to see Dr. Aikens here to-day; as when the clause was introduced he had said to him (Clarke) that it was one of the best things that could possibly be introduced. He thought it was not graceful in the medical men of Toronto to take the stand they were taking. It was

a well-known fact that the heads of the Law, the heads of Divinity, and the leading men of the City identified themselves with the Homœopathic system; and it looked as if the medical men of Toronto were beginning to tremble for their incomes and their standing. One good thing this Bill had accomplished, it had swept away all the old sectarian bills which had been smuggled through the House, and had substituted a measure which made education an essential, and would prevent the Province being flooded with ignorant quacks. By the old bills, these had the ball in their own hands, and could license whom they pleased; now their students will be bound to take their place along with our own students. They must be up in chemistry, anatomy, and the other essentials. He, too, was certain that in three years the Eclectics would be wiped from their board, as their system was hollow in the extreme, and without a particle of common sense to bear it up. If the Canadian Institute want the Bill repealed let them go to M. C. Cameron, the only man in the House who claims to be a Homœopathic representative. (Dr. Aikens came in at this stage.) That clause had been submitted to Dr. Aikens, and he had pronounced it a great boon to the profession. (Hear, hear.) He knew many men in the Allopathic school, who were a disgrace to their profession and their country, and this he attributed to the manufacturing of doctors by the various schools in Toronto.

Dr. Richardson—Heap it up. He could not join with Dr. Grant in the eulogium he had passed on the McGill College yesterday afternoon more especially as they had acted in a most systemati manner against the principles of the Bill lately passed.

Dr. Aikens rose to correct the Council as to the views he has always held in this matter. He had always been in favour of one Board of Examiners, and for many years had endeavoured to bring about this state of matters. Last year he had joined with the Council in the draft Bill which was before them at Guelph, in which there was nothing said about the incorporation of either the Homœopathists or Eclectics. When the Bill was introduced, he considered there were several breaches of faith. For instance, in the exclusion of Professors from the Council Board, he never agreed to that clause—again, the point in the Bill that proscribed a man being a representative for any place but the school with which he is connected. When the clause including the Homœopathists and Eclectics was introduced, he objected to it, and continued to oppose it till he saw distinctly that unless they admitted them they would never have a Bill at all. Another matter he could not, and never had agreed to, viz., the number of representatives. He had always considered it absurd that in a Council of 20, two thousand medical men should have

a representative of 12, whilst 117 men should be represented by 5. When the Bill was in progress he had considered it a good feature in it that the education of their students was to be so far simultaneous; that they were to be up in the causation and the history of diseases, in pathology, toxicology, chemistry, &c., but such a sweeping exemption, as made by clause 25, he had never known of, nor even heard of, till it had become law.

Dr. RICHARDSON had always been in favour of a central Board, but he looked upon the Bil as a fraud, from beginning to end. The exemption in clause 25 annulled any good that might otherwise be in it. It was capable of admitting any amount of quibbing and dodging. Again he repeated that it was a fraud, and by the little phrase in clause 25 the Homœopathic and Eclectic Boards would use every endeavour to lure young men to their Boards, by making their passage through the mill as easily and smooth as possible.

Dr. LAVELLE moved seconded by Dr. DICKSON, to the effect—"That the Council receives, with all respect, the communication from the medical section of the Canadian Institute, in reference to the Medical Bill; and while, in many respects, sympathizing with the members of the Institute, as expressed in their communication, they, at the same time, submit that they are not responsible for the present Bill, and have no alternative but to endeavour to have the Act carried out as effectually as possible in the interests of the profession and of the public."

Dr. RICHARDSON—We can't pass this resolution in the face of the resolution passed yesterday, thanking the Committee on Amendments for the amendments they had introduced into the original Bill.

Dr. CLARKE—You'll make fools of yourselves!

Dr. LAVELLE—I withdraw the resolution. I find we have swallowed the bigger pill.

Dr. AIKENS thought it verged on impertinence for members to come here and object to the Bill—gentlemen who had never raised their little finger one way or the other with regard to it.

Dr. CLARKE—It was most unjust of these men to talk as they had done. The very man who moved the resolution did come up; but all he wanted was to have examinations at Kingston; and though he knew these clauses were in it, he never said a word about them.

Dr. LAVELLE—I deny that the medical men of Kingston knew a single thing about these amendmenments being in the Bill.

Dr. MCGILL—You must have known.

Dr. LAVELLE—I did not know; and I call upon Dr. McGill to withdraw the charge of duplicity he had now made against me. He threw it back to him.

Dr. DICKSON—The medical men of Kingston were utterly ignored in the matter from beginning to end. The whole thing was a piece of duplicity; and it was as clear a piece of Parliament smuggling as ever occurred. Dr. Lavelle went as the representative of the Kingston Schools. He came and shewed himself before the Committee; got these objectionable clauses expunged; and, as soon as his back was turned again, they were inserted by those who thought to get a little renown from their connection with the passing of the Act. In fact, he knew one or two members of the Council who would have sacrifised the whole profession on the shrine of popularity.

Dr. RICHARDSON would state a fact. These amendments to the Bill had been all introduced on the third reading—when every one imagined that it would be passed as it had emanated from Committee. This was simply an imposition.

Dr. GRANT, in reply to Dr. Dickson, stated that he, as President of the Amendment Committee of the Council, never had the slightest notion of the Homœopathic clauses being in the Bill, till it had become law.

Dr. MCGILL explained that he had made every effort to disseminate the draft Bills as widely as he could.

Dr. CLARKE complimented Dr. Richardson on the display he had made before the Parliamentary Committee. (Laughter.)

Dr. RICHARDSON replied that the display he had made there had the effect of expunging these amendments from the Bill, and if they had not been surreptitiously re-introduced, they would have been wanting still.

Dr. MCGILL characterised the letter of the Institute, as nonsense—monstrous nonsense. (Laughter.) They asked them to separate themselves, how could they? It was monstrous. Were they to set themselves against the mind of the country; were they to defy the Legislature; were they to defy everything. It was nonsense—he would not mouth it—monstrous nonsense—(laughter)—especially at the instigation of an insignificant society like the Canadian Institute. He was glad to see the way Dr. Aikens had acted. The Dr. was somewhat of a tactician; but he had ended just where he ought to have done.

Dr. AIKENS—Where was that? (Laughter.)

Dr. MCGILL—You know you said that unless we had such a Bill, the Medical schools would be decimated.

Dr. AIKENS—The Doctor must be troubled with a strange aberration of memory, as I never made any such statement.

Dr. DEWAR—I beg to state that the Special Committee of the Council

appointed to watch the Bill, had acted in all good faith. This much he could not say of some of the members of Council. These gentlemen, especially one of them, all along had acted from ulterior motives.

Dr. RICHARDSON—Name, name.

Dr. DEWAR—Dr. Richardson.

Dr. RICHARDSON—The assertion is totally, utterly, in every sense of the term "False." And I call upon———

Dr. McGILL—I will not permit Dr. Richardson to interrupt the Council.

The PRESIDENT—We must keep to the rules of debate.

Dr. DEWAR went on to state that the Committee did not manipulate the Bill in any way further than to protect their own interests. They could not help themselves in the matter of admitting the Homœopathists. They at once saw that their admission was a certainty, and they had to make the best of a bad bargain.

Another sharp discussion occurred between Drs. Richardson and Dewar, in the course of which anything but terms complimentary were exchanged. On the motion of Dr. Dickson the members of the Canadian Institute present were invited to address the Council.

Dr. CANNIFF repudiated the term "impertinence" applied to the conduct of the Institute. An association with Dr. Hodder as their President, scarcely merited the epithet "contemptible."

Dr. CLARKE.—What do we care about Dr. Hodder; he may be a "little god" amongst you; I don't care about him.

Dr. CANNIFF.—That may be so; but I am not aware anybody thinks much of you.

Dr. AGNEW was surprised to hear Dr. McGill getting so Conservative. He could remember the day when the Doctor did not look with such horror on the opposing of an Act of Parliament as he seemed to do now.

Dr. BROUSE wished to make a few remarks, but was interrupted by cries of "Divide." On the roll being called, the original motion was carried—ayes, 11; nays, 3.

MOTIONS.

Dr. RICHARDSON moved the following resolution: "That this Council would emphatically condemn the following amendments to the Medical Act, viz.: 1st. The 25th clause by which it is provided that every candidate who shall, at the time of his examination, signify his wish to be registered as a Homœopathic or Eclectic practitioner shall not be required to pass an examination in either Materia Medica or Therapeutics, or in the theory and Practice of Physic, or in Surgery, or Midwifery except the operative practical parts thereof, before any Examiners other than

those approved of by the Representative in the Council of the body to which he shall signify his wish to belong.

2. The 4th clause by which it is expressly provided that the saving effect of the 36th section of the 29th Vic. Cap. 34, "shall not be modified or restricted in any way whatever," and in consequence of which the rights, franchise, power or duty, of the Homœopathic or Eclectic Board are not in any way "abridged, altered or affected."

3. The 3rd section of the 23rd clause, by which "any person, who has actually practiced medicine, surgery, or midwifery according to the principles of Homœopathy or the Ecletic system of medicine before the first day of January, 1860, and for the last six years in Ontario, may, by the direction of the Representative of the Homœopathic or Eclectic systems of medicine "be admited to register under the act, and by so doing, according to section 6, become a member of the College of Physicians and Surgeons of Ontario."

A lenghtened discussion ensued on this resolution, in which Drs. Richardson, Aikens, Berryman, and Dickson took part. In the course of the discussion some smart passages of arms occured, and degenerated, as Dr. Brouse said, into something very like a school boy squabble.

Dr. Turquand believed, as he believed the bible, that the Homœopathists were wrong, and consequently could have no sympathy with them. However, so long as a man had a thorough elementary education, he might call himself a 'salt' doctor, and dose his patients with salt and water; and if he found people—whether they were members of Parliament or no—who were willing to go in for salt and water, he had nothing to say against them. He might pity them, and he would not condemn them, still he could never consult with Homœopathists and Eclectics.

Dr. FULTON having spoken, the resolution was lost by 9 to 6.

It was moved by Dr. AIKENS seconded by Dr. Brouse,—That the Treasurer is hereby instructed to refund $5 to such practitioners as were entitled to be registered before the 1st July, 1865, and who have paid $10 for their registration. Carried.

Moved by Dr. AIKENS, seconded by Dr. Brouse,—That Homœopathics and Ecletics, who had license from their respcetive boards before the first July, 1865, and who may within one year after the passing of the "Ontario Medical Act" desire to register, are permitted to do so on the payment of five dollars and otherwise complying with the provisions of said Act. Carried.

Moved by Dr FULTON, seconded by Dr. McGill, that the Registrar be instructed to announce by advertisements in THE GLOBE and LEADER "that in accordance with the provisions of the new Medical Act,

all Medical Practitioners who were qualified and entitled to be registered before the first day of July 1865, may, on complying with the requirements of the Act obtain such registration on payment of a fee of $5 provided they register before the 23rd day of January, 1870."

A discussion followed, but as several members expressed themselves against such extravagance, the motion was withdrawn.

A vote of thanks having been passed to the President, the Counsel adjourned *sine die.*

The following by-laws adopted:—

BY-LAW AFFECTING ALLOPATHS.

By-law to regulate the holding of elections in the twelve electoral districts described in Schedule C of the Medical Act:—

Whereas power has been granted to the Medical Council in the Ontario Medical Act to make by-laws for determining the manner of holding the elections under the said Act, be it therefore enacted as follows:—

1. This by-law does not apply to the election of Homœopathic or Eclectic members of the Council.

2. The election of members to represent the Territorial Divisions referred to in section 12 of the Ontario Medical Act, shall be held respectively in the places mentioned in schedule "A" to this by-law.

3. That there be no nominations for the position of members of the Medical Council, but that a form, according to the schedule "B" to this by-law appended, be transmitted by the Registrar to each registered medical practitioner to be filled up in favour of the candidate of his choice; and that such papers be forwarded to the returning officer; and such paper shall not be examined, nor such envelope opened, until the day appointed for the recording of the votes. Each envelope to have a printed address by which the returning officer may recognize its character. These papers to be carefully examined at two o'clock p. m. on the day specified by the Act, at which time the Polls will be declared closed; and a strict and careful record of each legal medical vote be made by the Returning officer.

4. At the close of the poll the Returning officer shall add up the votes given and declare that one of the candidates who has received the largest number of votes, duly elected to serve as member for the division.

5. The Returning officer shall make a certificate under his hand of the result of the elections, and shall transmit the same to the Registrar of the Council within the three days next following the day of the election; and that all the papers connected with the election, be forwarded to the Registrar of the Council and be kept by him as the property of the Council.

6. In case two or more candidates receive an equal number of votes Returning officer shall give the casting vote for one of such candidates, and his vote shall decide the election.

7. In the event of the death or unavoidable absence or refusal to act of any Returning officer appointed by the Council, it shall be lawful for the present representative in such division to appoint a Returning officer in the place of the one deceased, absent or declining to act.

Schedule (A) gives the name of the Division and the polling place in each.

Schedule (B) gives the form of polling papers.

BY-LAW AFFECTING HOMŒOPATHS AND ECLECTICS.

A By-law to regulate the holding of elections of Homœopathic and Eclectic representatives in the Medical Council under the Medical Act of Ontario.

Whereas power has been granted to the Council in the Ontario Medical Bill to make By-laws to regulate the manner of holding the elections under the said Act, be it therefore enacted as follows:

1. This By-law shall apply to the elections of Homœopathic and Eclectic members of the Council.

2. Be it enacted that for the purpose of carrying out the provisions of subsection 2, of clause 12 of the Ontario Medical Act, with reference to the election of Homœopathic and Eclectic representatives of the Council of the College of Physicians and Surgeons of Ontario.

3. That the Homœopathic members of the College of Physicians and Surgeons of Ontario shall meet at the Queen's Hotel, in the city of Toronto, on the first Tuesday in June, at 2 o'clock, p. m., to make arrangements for the election to take place on the following Tuesday.

4. That there shall be appointed at this meeting three scrutineers for said election who shall be Homœopathic members of said College, that such Homœopathic members of said College who may be unable to attend at this meeting, may nevertheless vote for the appointment of said scrutineers by sending their votes duly signed to the Secretary of the Homœopathic Medical Board in a sealed envelope by mail, and such votes being recorded by the said Secretary, shall have the same value as if the voter were personally present.

5 That the scrutineers so appointed, shall forthwith cause voting papers to be sent to every Homœopathic member of said College by mail with instructions that the names of the five Homœopathic members he may desire to elect as his representative in the Council of said College, be legibly inscribed in said paper, which is to be returned by mail to the Secretary of the Homœopathic Medical Board without delay, in a sealed

or duly closed envelope, marked on the outside, "vote for Homœopathic Members" of College of Physicians and Surgeons of Ontario.

6. That the Secretary of the Homœopathic Medical Board shall on the second Tuesday in June, in presence of the scrutineers above referred to, open the envelopes containing the votes, and the five names having the highest number of votes, shall be returned to the Registrar of the Council of Physicians and Surgeons, as Homœopathic members of said Council for the next three years.

7. If upon examining the voting papers it should appear that there is an equality between two or more, having the lowest numbers of votes, it shall be lawful for the scrutineers above mentioned to decide by lot which of those names thus being equal, shall be chosen as representative.

8. That in the event of the unavoidable absence of any of the scrutineers appointed at the meeting above referred to, on the 1st Tuesday in June, it shall be lawful for the other scrutineers and the Secretary of the Homœopathic Medical Board to nominate some other Homœopathic member of the College to act as scrutineer in his stead.

9. That the present officers and members of the Homœopathic Medical Board shall be eligible as scrutineers.

10. Wherever the words "Homœopathic members of Homœopathic Medical Board" occur in the above clauses, it should be understood that the same provisos shall be applicable to the Eclectic members in the Eclectic Medical Board, and that they shall comply in every respect with the arrangements above made for the Homœopathic members.

J. A. GRANT,
President.

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A very interesting application of chemistry to the arts was exhibited recently at the Dublin Chemical club, and subsequently at the Conversazione of the President of the College of Physicians. It has been found that one of the products of fermentation in ale and porter can be effectually replaced by the addition of grape sugar to the liquor, and for this purpose grape sugar is now being manufactured very largely from starch for the use of brewers and extensively imported. The objects achieved by the use of the grape sugar are justly a very considerable saving of the malt, and as may be anticipated a considerable reduction in price of malt liquors; and secondly, an increased capacity for keeping in the liquor made with grape sugar, which will make it peculiarly suited to foreign consumption and the export trade, and will obviate the very serious waste which now accrues from the spoiling of the liquor.

# MICRO-PHOTOGRAPHS OF TRICHINA,

TAKEN FROM PORK AND FROM HUMAN MUSCLE.

One—Free Trichina, from Pork.—100 diameters.

Two—Single Trichina, from Human Muscle.—150 diameters.

Three—Trichina embedded in Human Muscle.—150 diameters.

Four—Trichina encysting; from Pork.—50 diameters.

Five—Trichina fully encysted but not calcareous; from Pork.—50 diameters.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*On Microscopic Examination of Flesh for the detection of Trichina.* By J. Baker Edwards, Ph. D., F. C. S., late Lecturer on Chemistry and Medical Jurisprudence at the Royal Infirmary School of Medicine, Liverpool, England. (With Photograph.)

The attention of the medical profession in Canada, has been recently called to the detection of Trichina by the occurrence of two fatal cases of Trichiniasis in Hamilton, Ont., and of several cases in Montreal, of a more protracted but less serious character, and an enquiry has been instituted by the Board of Health in Montreal, as to the existence of this parasite in the pork offered for sale in the public markets, and as to what steps can be taken by the authorities to protect the public from the sale of meat so infested.

The report of the commissioners appointed to investigate the subject states that no Trichina were discovered in the forty samples examined, and the failure on the part of some medical men to discover any in the portion of ham which gave rise to the illness of the family in College street, has raised some doubts as to whether the diagnosis could have been correct. This has been permanently settled by incisions into the painful muscles of two of the patients, from whom portions of muscle were extracted and living Trichina found therein. The differences of opinion which have been expressed in relation to these cases, proves how little the scanty literature on the subject of Trichina has been read and how easily such cases may escape professional recognition, where no fatal results ensue.

These cases will be fully entered into by Dr. Bessey, I shall therefore confine myself to a history of the examination.

On Good Friday, March 26th, I received from Dr. Bessey a slice of ham which he informed me was next in cut to a portion which had been eaten by several persons on the previous day, and caused serious illness.

He wished a special examination for Trichina. During the same afternoon and evening I examined a number of thin sections mounted in glycerine, but could find only one satisfactory specimen. In the morning I re-examined some of these mounts and found a group in one slide. These were examined by several friends who confirmed my observation. During the evening with the assistance of my friend Mr. A. S. Ritchie, I washed a portion of the muscle out with ether, drying it with pressure on filter paper, so as to extract the fat globules, and then mounted thin portions in Canada Balsam. On subsequent examination one of these was found to contain a numerous group of Trichina both in a free and encysted state, but quite transparent, and out of from 50 to 60 slides examined, about 5 or 6 contained Trichina. The photograph No. 1, shows the Trichina in a group and in a free state; at least 3 or 4 are here travelling in company up the muscle. No. 4 shows a number in the edge of the muscular band both above and below. On the slide from which this is taken, 13 may be counted under the field of the microscope at one view. The position and nature of the worm within the cyst in the centre of the field is very curious; his cyst is perfectly transparent, but it arrests polarized light, so that while the surrounding muscle polarizes freely, it remains unaltered, except in the anterior portion which is protruded from the cyst, as if it were a gelatinous mass, through which the head may pass freely in search of nourishment. The attitude of this creature appears to be that of feeding on the portion of muscle into which the head is inserted, and the portion thus protruded from the sac polarizes light, like the surrounding muscle. Figure 5, is the completely encysted worm, horizontal section, showing six apparent stumps which prove that the worm lies in *three* convolutions when it has attained its full size. In no case were the cysts found to be calcareous, and its seems probable that they only become so after laying a very considerable time in the muscle.

Nos. 1, 4 and 5, were all taken from the pork in question, and show that the worm existed in various stages of developement, and especially those early stages where rapid growth would ensue if carried into the stomach and intestines.

No. 1, is magnified 100 diameters. Nos. 4 and 5, 50 diameters. Nos. 2 and 3 are 150 diameters. The centre photograph represents a portion of human muscle from the last fatal case at Hamilton. Two generations are visible in this muscle, those in the spiral form being a young generation marching past, while the upper curl on the right is the only portion in focus of a large worm which lies closely curled, and is slightly encysted.

No 2—Is the worm picked out by needles from the Hamilton muscle,

but probably not of full size. Those obtained alive in Montreal, were some of them about double the size of the above.

These worms are believed to be hermaphodite; when therefore one becomes fairly attached to the lining of the stomach or intestine, it throws off brood after brood for an indefinite period, and as the young will naturally issue from about the same spot, it follows, that one generation after another will swarm up the same line of muscle and overtake each other on the way. It is probable that a thousand or two of young worms are thus put on the same track by one breeding individual. The next swarm may be an inch or two distant, and these again work up the muscle in company; hence it follows, that here and there in a body thus infested multitudes will be found, while other muscles and considerable portions of flesh are unaffected. As a matter of observation wherever the worms are found they are in close company, while other portions of the flesh contain none. We may therefore expect to find but occasional groups in a transverse section of muscle, or of flesh, while in an infected muscle laid longitudinally we shall find continuous multitudes if we find any.

The flesh should therefore be examined, by dissecting out the muscle lengthwise, and examining it under manipulation with the erecting eye piece, for which purpose a $\frac{2}{3}$ or $\frac{1}{2}$. in. object glass will be found most convenient. For examination under polarized light, Canada Balsam is the best medium for mounting, but for general examination of structure I have preferred a mixture of one part glycerine and one part aqueous solution of carbolic acid. I surround this with Deane's Gelatine forming a cell, which is secured by a coating of shellac varnish. The best illumination is by the smallest diaphragm in the Achromatic Condenser, and the structure is best seen by a half inch object glass and high eye piece.

The worms are with some difficulty removed from the muscle, they are found in every conceivable twisted form, and although usually motionless, in one or two cases they have been seen to change their position after being mounted some hours in the Glycerine. In one of the cases at Hamilton fatal in 3 weeks, one of the worms measured 1-30th inch; those obtained from the pork were about the same size; the one shown in fig. 2, from the second case, fatal in 6 weeks, the worm measures 1-20th inch; while those taken from the living patients 2 months after the pork was eaten are the largest we have yet seen and measured.

It would therefore appear that while free they continue to grow in the muscle for at least 2 months; they probably then begin to encyst, but neither in the Hamilton or Montreal cases, nor in the cases recently reported in Chicago have any been found thoroughly encysted, and it is probable that the calcareous deposit which renders them opaque and

therefore visible, does not form under a period of 12 months. It is therefore only observed in cases where the disease has been long outlived. These calcareous cysts, however, are capable of ready solution in the gastric juice, and the worms soon become active even after years of dormant existence. The varying character of these cysts, may probably determine the period at which characteristic symptoms declare themselves. In those cases where the worms are to any extent in a free and un-encysted condition we may expect these symptoms to be manifested in a much shorter period than when encysted, and probably be accompanied with more gastric irritation. It is also possible that some of these, young as they are, enter the muscle in an impregnated condition. Cases in which pork has contained myriads of old encysted Trichinæ have been well studied in Germany and in New-York, and it is hoped that these Montreal cases will contribute to our knowledge of the disease, in an earlier and less formidable stage of developement.

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*Trichiniasis being an abstract of an essay submitted to the Medical Faculty McGill University for the degree of M.D. C.M.* By THOMAS D'ARCY LUCUS.

The present era of the world is emphatically an era of progress, an era of growth and developement, an era in which the human mind having emancipated itself from the trammels which had so long fettered its free action, having thrown aside the narrow views and prejudices of former ages, having burst asunder the barriers which false notions of men and things had reared, has at length begun to think for itself in every department of knowledge.

Mankind had long enough submitted with servile obedience to dogmas which a wider range of investigation had proved to be fallacious. The cobwebs of error were at length to be swept away from the wall and the freed intellect, raised to its true position, was to soar aloft on the pinions of its own innate capacities to a nobler height than was ever dreamt of in the wildest dreams of the old philosophers.

From amid the mouldering graves of older thoughts and older ideas a new light was to burst forth upon the earth, an edifice of fairer and more majestic proportions was to be erected, which combining the pure logic of the Aristotillian school with the progressive spirit of the Moderns, was to open up new avenues of enterprise to every condition of human life, and scatter blessings along the pathway of every one who honestly endeavoured to grasp them.

Nor has this progress been confined or limited to any one sphere but has permeated all branches of industry, all science and all art; has sent the traveller forth to discover new countries and the astronomer new worlds. Its influence has affected all classes of society, the learned and the illiterate, the sage and the savage. Man actuated by it has measured the height of the loftiest mountain and delved deep down into the inmost recesses of the earth, has discovered the gold of California and the diamonds of Brazil, has mapped out the heavens and numbered the strata of the earth, has made the lightning subject to his will and utilized the most worthless refuse of the workshop. Its spirit is every where at work, in the silent labors of the student, who, by his midnight lamp is striving to evolve new problems from the hidden secrets of nature, or to find the key to those mysterious laws which the wisest of his predecessors were unable to unlock. Nor has this spirit been confined to the immaterial world, nor to abstract speculations on the origin of matter. It is every where abroad, in the busy active multitude, who, with ready hand and resolute heart are devising new schemes for the civilization and enlightenment of the world, who are building our railroads, digging our canals, founding our cities, endowing our colleges and making the wilderness blossom like the rose.

As a mighty moral agency too, its influence may be seen and felt in all the varying phases of human existence, in improved systems of education, in wide spread plans for the relief of the necessities of the poor, in more liberal forms of government, and in adding to the comforts and happiness of the millions of our race, who for centuries where treated with scorn and contempt, or trampled to the very dust beneath the feet of their more fortunate fellow mortals.

The world is growing older and wiser, but it must be acknowledged that it has been doing so from the beginning. There have been times, indeed, when the deadly blighting mildew of ignorance and superstition, seemed to envelope all the domains of human thought, seemed almost to destroy every vestige of the accumulated lore and wisdom of past ages seemed almost to bury in eternal oblivion, all that genius and experience had been able to gather from the labors and researches of the master minds of our race. Yet these have been, as it were, only breathing spells during which the intellect of man was recuperating its exhausted powers, for entering the lists once more with renewed strength and energy.

All sciences and all professions have had to encounter this severe struggle, have had manfully to face the foes who surrounded them on all sides and sought to bring them down to their own level, sought to mingle

the dust of earth with the heaven born aspirations of the earnest seeker after truth. In no profession has there been such bitter opposition to grapple with and overcome as in that of medicine and surgery. Its origin took place in those remote ages which are antecedent to all written records, in the very morning of history, in the primæval period of our race, in fact when the first cry of human suffering was heard, when the first wail of misery or woe was uttered by human lips, when the first moan of anguish or of pain was wrung from one human heart, there and then did the first physician enter upon the functions of his office. Founded upon the study of man's physical and moral nature in health and in disease, and taking its stand on the eternal principles of honesty and truth which lie at the root of all science it has had to contend against enemies greater in number and more determined in their efforts than any or all other professions from the days of Hippocrates to the present period of time.

Beginning with the cradle and ending only with the tomb, every being has a direct interest in maintaining its rights and defending them from the attacks of unprincipled men. Yet it has been assailed and is yet assailed as vehemently as in the days of old, by favourite theories. Pseudo-science and Pseudo-philosophy have in vain hurled their thunderbolts of Homeopathy, Hydropathy, etc., against it, but appealing to a higher model of excellence than the ignorance of the crowd, or the sympathies of the vulgar, it has banished the disciples of Hahnemann or Broussais with as much ease as the quacks of the older time were disposed of.

It has not been like some sciences or would be sciences the creation of any one man, or of any set of men, but founded on observation and experience has pursued the even tenor of its way through a long series of years. Amid the changes and revolutions of nations, the rise and fall of rival states, the temporary popularity and decay of false creeds, both in religion and science, it has steadily gone on adding something to its knowledge of diseases and their antidotes, from every race, and almost from every individual who have played their parts on the ever shifting stage of time. Its onward progress may be fitly compared to a noble river whose waters are daily increased by numberless streams, creeks and rivulets, till that which was in the beginning small and mean, becomes in the end grand and majestic, an object of wonder and admiration. As we look back to the first faint dawn of its history, we behold it a secret carefully hidden in the breasts of Egyptian priests, or confined as a precious legacy in the family of Æsculapius. We might even trace its history back to an older source, to the more ancient nations of the East, the primæval founts of knowledge, the mighty races that even then had

passed away for ever, leaving only the monuments of their genius and skill behind to prove that they had ever existed. However it was in that land which abounded most in beauty of form and wealth of intellect, in that land of poets and philosophers, among that people who seemed to have had complete control over the empire of letters and of thought, in a word, in Greece that it was first properly elevated to the rank of a science and a termination put to the squabbles and confusion of the "Empiric" "Methodic" etc. schools, by the immortal Galen of Pergamos.

Receiving constant additions with every step that knowledge gained, much new light was thrown upon it by that remarkable people, who emerging from the deserts of Arabia and inspired by the novel enthusiasm of a new faith-spread their victorious arms throughout Asia, Africa and Europe. The Arabian mind differed much from the Grecian. The former lacked the calm logical power, the facility of tracing effects to their causes, the analytical capacities of the latter, but was its equal in imagination, that wondrous faculty, which clothes all objects with a richer and more gorgeous hue, which perceives almost by instinct the truths which others arrive at only by the slower processes of reason, and the Arabian was far superior to the Greek in energy and earnestness. The doctrines of Mahomet "which had elevated a whole nation from a degrading and debasing idolatry to a knowledge of the true God" had infused into their hot southern blood a zeal and determination which overcame all the obstacles of science as well as of arms. They consequently erected on the ruins of the older systems an empire of letters which adds more to their glory than their bloodiest victories or their greatest conquests. Avicenna was for a time esteemed higher than Galen, and in his person Arabian researches in this field attained their highest perfection. But it was under the clear blue sky of Italy, in a city fanned by the warm breezes of the Mediterranean, amid the decay of an older civilization that the Mediæval schools of medicine and surgery reached their utmost developement. While the rest of Europe was buried in the very midnight of the dark ages, while only in the rude cell of some solitary monk burned yet the feeble taper of learning, under the rule of the Northmen who wrought such wonders and were the revolutionizers of Southern Europe's effete nationalities, flourished in lonely grandeur, the Medical school of Salerius, the forerunner of others still greater. The advancing tide of civilization, the revival of learning consequent on the downfall of Constantinople, the enlightened patronage of several popes and the great impetus given to both arts and commerce by the rounding of the Cape of good Hope, and the discovery of America,

all exercised an influence in advancing this as well as other studies. The fearful pestilences which swept like devouring scourges or torrents of desolation through every land also added their quota to the stores of information. The profession began to assume a loftier position—began to be separated in the opinions of the ignorant from the charons of the Magician, or the calculations of the astrologer, until now the medical man who really does his duty is looked upon as a benefactor to his fellows.

*Surgery*, it must be acknowledged, has made even more rapid strides. Operations which formerly baffled the skill of the most distinguished of the profession are now things of daily occurrence. The most varied forms of desease are now quite thoroughly understood and a cool brain, a firm hand and suitable instruments are able to accomplish things which in days past would have been regarded as miracles.

During the past fifteen years the subject of human entozoa has received considerable attention from Continental, English and American Pathologists and at the present period of time our knowledge in this department of science is nearly as fully established as in most other branches of the healing art. It has been found that some of these parasites, like the ascarides and the teniæ, are introduced into the alimentary canal in the egg state and can remain there without causing any very serious trouble. One of the human parasites, however, the Trichina Spiralis is by no means so harmless an inmate. Ingested in a semi-developed condition it soon produces a legion of young which do not remain in the locality of their birth, but start at once for another situation in which the second stage of their developement is accomplished.

Millions of these larval trichinæ liberated within the gastro-intestinal canal perforate its walls, and then either by the aid of the circulation or by the process of vermiculation reach the voluntary muscular tissue throughout the body. The irritation produced by this numberless progeny may be sufficiently severe to cause a violent fever and even death. During some of the epidemics in Germany twenty-eight per cent of the cases proved fatal (Leuckart) and hence considerable attention has been given by the profession to the Natural History, Anatomy, and Physiology of this remarkable worm.

The importance of the subject no one can deny who has read of the numerous and fearful outbreaks of the disease on the continent or of any of the veritable epidemical propogations of trichina in different localities of most of the countries in the world. The great improvement produced by ascertaining the pathological course of this disease by Zenker is destined to be to the human frame what Jenner's discovery of Vaccination has been and will be to the human features.

The Trichinal or Trichinatous disease or Trichiniacis is a helminthic disease, attended with fever, running a definite course and produced by the introduction into the system of an innumerable number of entozoa called Trichia spiralis.

The worm itself, was named by its discoverer the Trichina spiralis—Trichina, the generic portion from a Greek word, for a hair, in allusion to its minute filiform shape—spiralis, the specific part from the Latin word " Spiralis " on account of its assuming a watch spring like appearance after it has undergone encapsulation. The peculiar appearance presented by the tail has induced M. Davaine to name it the Pseudalius Trichina.

The fact, that a knowledge of what was known of any department of science during the past adds to the interest of him who investigates it, being generally conceded the prominent circumstances connected with the history of this worm demand a brief consideration. It is now claimed by the Jews and some Helminthologists, that the existence of the Trichina in the flesh of the swine was known to Moses fifteen hundred years before the Christian era ; but a careful reading, by an unbiassed person, of the narrative as given in the first seven verses of the eleventh chapter of Leviticus, conveys no such information in any of its bearings.

The first recorded notice of the cysts of the Trichina spiralis was made by Tiedman in the year 1822. Ten years subsequently these cysts attracted the attention of Hilton of Guy's Hospital, London, but were regarded as nothing more or less then muscular degenerations. The honor of having discovered this entozoon itself is due to Mr. James Paget who in the month ef February 1835, sent portions of the muscular tissue of the subject he had just been dissecting and in which he had seen the worm, to several distinguished Microscopists in England. Soon after, Professor Owen, to whom a portion of the flesh had been transmitted, furnished the public with a partial description of the worm. After a few months more had elapsed, Dr. Farre described its organs of generation and Intestinal canal. Herbst in the year 1845 ascertained the existence of the worm in a cat. But a discovery second to none other, except perhaps, that by Paget was made by Prof. Liedy of Philadelphia who in the year 1846, ascertained its existence in the flesh of swine. The Theory held by many Pathologists—that of spontaneous generation—was at this time abandoned, a direct means of communication being established. In the latter part of the year 1859, Leuckart ascertained that the worm after being introduced into the stomach of an animal became freed from its cyst and increased rapidly in size. But the subject was considered merely as a scientific curiosity rather then one of pathological

interest by all experimenters until Zenker of Dresden on 12th of Jan., 1860, ascertained the nature and source of the disease. Virchow of Berlin and Leuckart of Giessen have also given their quota in the furtherance of this subject.

The Trichina Spiralis belongs to the class of encysted entozoa. Its favourite habitat is the striated (Voluntary) muscular tissue where it becomes encysted and remains for years in a semi-developed condition, until either calcification takes place, or the animal which it infests is used for food. In the encysted condition the average length of the worm is $\frac{1}{35}$ of an inch and the $\frac{1}{550}$ of an inch in its central diameter, (Zenker). Each of these ovoid cysts, in which the worm may be seen coiled up like the spring of a watch, really consists of two distinct portions, the internal more delicate membrane immediately surrounding the worm and an external coarser covering lying in contact with the tissue of the body, of the bearer. The distinction between the inner and outer coverings becomes less marked as the age of the cyst increases, until at length the Trichina appears to be contained within a single cyst. While these changes are going on in the structure of the cyst, its outline assumes a different form, from being ovoid it becomes more spindle shaped. The consistency of the envelope increase in proportion to the thickness of the outer covering. Generally but one entozoon is contained within a single cyst, but examples have been given in which two or three were found. While in the encysted condition the worm is said to be non-sexual; the Intestinal canal occupying the greater part of the cavity of the body; the larger and less pointed extremity contains the arms; the more attenuated extremity corresponds to the head. After being taken into the stomach of an animal, the Trichina is freed from its cyst by the solvent power of the Gastric juice; it next passes into the small intestine where it increases rapidly in size, its sexual apparatus being now recognizable. A full grown female Trichina is about $\frac{1}{10}$ of an inch in length.

The generative apparatus of the female Trichina occupies somewhat more then one half of the cavity of the body. It appears to be made up of an elongated sac, the blind extremity being a little in front of the anus and the outlet at the posterior termination of the first fourth of the body. It is divided into a secreting or greater portion and a receiving or lesser portion, which occupies the anterior part of the apparatus, serving as a receptacle for the eggs and young Trichina, the former having its analogue in the ovaries, the latter in the uterus. The Intestinal canal begins with the mouth in the attenuated extremity of the worm, and consists of a series of cells occupying the anterior $\frac{3}{5}$ of the body, and of a tube filling the space left by the generative apparatus in the posterior $\frac{2}{5}$ of the cavity.

The generative apparatus of the male Trichina consists of a tube which begins in a cul-de-sac a little in front of the anus, the outlet is situated at the posterior termination of the second third of the body; here it doubles upon itself and returns towards the anus where there may be seen a pouch filled with sperm cells. The digestive apparatus is similar to but occupies a greater relative space than that of the female. A full grown male Trichina is about $\frac{1}{50}$ of an inch in length—much smaller then the female; they are also much fewer in numbers.

In the course of two or three days the trichina become sexual at which period copulation takes place; when the embryo arrives at the opening of the uterus it passes out and begins its peregrinations. Having reached the muscular tissue it becomes furnished with an alimentary canal, grows rapidly and ultimately attains the proportions before stated; they now become encapsulated, assuming a state of hybernation, as it were, and after bringing forth their brood the parent trichina pass off with the fœces and perish.

There are no accurate means of ascertaining the precise number of larval trichina present in a single "bearer" at any one period of time; the number is evidently extremely variable, but as an approximation, the following calculations may be made. Prof. Dalton counted 29 trichinae in a piece of human muscle measuring the $\frac{1}{50}$ of an inch in thickness and the $\frac{1}{12}$ of an inch square; these measurements are equivalent to $\frac{1}{7200}$ part of a cubic inch, a cubic inch of muscular tissue weighs about half an ounce, there would thus be in one ounce of flesh thus affected 417,600. The voluntary muscular tissue, according to some, weighs four tenths of the entire body, supposing all parts of this tissue to be equally infested there would thus be in an adult male weighing 180 lbs, 72 lbs. or 1152 ounces of such tissue and hence 480 384,000 trichina.

Leuckart estimated that an ounce of the flesh of a cat examined by him, contained 325,000 trichina, if the muscular tissue of the human body were equally infested then—in accordance with the about data, there would be in a single "bearer" 481,075,200.

As further illustrative of the subject the following may be stated, Prof. Dalton counted 12 trichinae in a piece of ham containing $\frac{1}{7200}$ of a cubic inch, this would be equal to 86,400 to the cubic inch or 172,800 to the ounce or 2,764,800 to the pound; a laborer consuming one pound of ham per diem for four days would thus have introduced into his stomach 11,059,200. The gastric juice, succus entericus and pancreatic juice, have the power of dissolving the cysts in which the trichina are contained; when this immense number of trichinae, now liberated from their encysted asexual condition, undergo the changes previously stated. Each female

trichina according to Virchow furnishes a brood of 200, of 400 according to Gerlach, Virchow and Leuckart places the number in each brood at 1,000, the average between these three authorities being about 533, supposing $\frac{6}{7}$ of the trichina introduced into the stomach to be females there would then be 816,818,433 trichina ready to enter on the destruction of the unfortunate bearer.

*Causes of the disease.*—Any substance is a medium of communication in which living larval trichinae exist, if introduced into the stomach, and will produce the disease the severity of which will depend, usually, on the number of trichina, and the general state of health of the patient; in man it is nearly always caused by eating undercooked pork; other animals in which it has been found are the cat, mole, crow, hawk and jackdaw. That a person can become infested by eating underdone beef can no longer be denied; eleven cases are already on record. Ruppercht ascertained it be a medium of communication in eight cases, Simon in two and Dr. Percy, of New York, in one. But when the ox or any other vegetable feeder becomes trichinized it is always due to accidental circumstances.

On the authority of Leuckart, Virchow, Lewker and Stecher the following are arranged as showing the liability to artificial trichinization. *Very easily infected*, guinea pigs, mice, hogs (*domestic, wild boar*) rabbits and hares, cats and eels. *Easily infected.* Beetleflies. *Infected with difficulty*, calves, sheep, cows and roebucks. *Infected with great difficulty*, oxen, bulls, she goats, dogs, foxes. *Not infectable*, crabs, he goats, fishes amphibia and birds of all kinds.

To ascertain the comparative frequency of pork being trichinous, investigations were made by the Chicago Academy of Medicine, as the result of their researches, it was estimated that two per cent of those brought into that market were affected more or less with trichiniasis! The result of the compulsory inspection of pork in Germany from December 1863, to November 1865 showed the per centage to range from $\frac{1}{17}$ part of one per cent to 4 per cent.

The question, has the disease existed from the most remote period of antiquity naturally suggests itself for consideration. Without occupying space and time in the consideration of this subject the opinion of the ablest pathologist of the present day may be accepted. Virchow holds that the flesh of the swine has always, been affected with trichina to a greater or less extent, and gives as an explanation of the greater frequency of the disease during the past few years, "The imperfect cooking compared with former times."

It cannot be questioned that prior to the description of the pathology of the disease by Zenker some of the cases set down for rheumatic and

typhoid fever were undoubtedly cases of trichiniasis. With regard to the frequency of the disease in man, Wm. Turner, M. B., senior demonstrator of anatomy in the University of Edinburgh remarks; "I am disposed to look upon it as much more common than is generally supposed, between one and two per cent of the bodies which have come under my observation during the last five years having been so affected (Edinburgh Medical Journal, 1860, pp. 216). On the authority of Virchow, the worm is found in two per cent of the subjects brought into the Dissecting rooms of Berlin.

Recent observations have convinced me that a subject brought into the dissecting room of McGill University during the session of 1866–67 was trichinized. The peculiar white speckled appearance of the muscular structures and the difficulty of making a respectable dessection were very obvious.

It has been proposed to keep meat for a long period in order to obviate the fell effects of the poison, but the results of the experiments made in Germany and India show that the trichina would not be rendered inert by the adoption of this plan. And Davaine's experiments are conclusive on this point and show that although the adult worms survive, but for a short period, yet the larval trichina will live for a long time in flesh which has already undergone putrefaction."

He further observes that "the debris of an animal devoured by carnivora may became fatal to rodents or a carcase near a marsh or rivulet may communicate parasites to the ruminants which drink the water; or to pigs." (Cobbold pp. 341) *Prime source* of *infection* in *the hog*. Langenback held that the earth worm was the original source of infection, Schacht claimed that the starting point was the beet root, Herbst believes it to be the mole. Virchow and Leuckart have shown the fallacy of the two former theories and question the accuracy of the last. The fact is the question must still be considered sub-judice.

*Clinical History.*—In considering this portion of the subject it will be convenient to adopt the usual divisions, as regards its course, into stages namely: 1st. Stage, or the period of gastro-intestinal irritation: 2nd. Stage, or the period of muscular irritation: 3rd. Stage, or the period of convalescence or death.

The severity of the symptoms in each of these stages depends on the number of larval trichina in the bearer and the general health of the patient; widely different must the symptoms be, when but a few thousand are engaged in their journey, from those produced by many millions. There may be no symptoms for which the physician would be consulted and yet the patient may be trichinized so that if, but a small portion of

his flesh be introduced into the stomach of another, severe disturbance and even death may result, the nature of this worm being such that it produces but one brood during its whole life, and this can take place only in the gastro-intestinal canal. It has been ascertained from numerous recorded cases that the symptoms of the first stage may be well marked, while those of the second stage claim but little attention; secondly, there is a class of cases in which the characteristic symptoms of the first stage are nearly absent and those of the second stage well marked; thirdly the symptoms appertaining to both stages may be proportionably present, and this class, it may be remarked, constitutes by far the greater number.

*Stage of irritation of the gastro-intestinal canal.*—Nausea; vomiting; anorexia; coated tongue; abdominal pains and derangement in the functions of the bowels characterize this stage. The vomiting is generally increased by the introduction of food into the stomach. Rarely is the anorexia complete. Sometimes there is constipation, if so it is obstinate and continues throughout the disease unless the case be about to terminate fatally, when diarrhœa invariably takes place, generally there is a loose state of the bowels, and tenesmus accompanies this condition; there may be but two or three liquid stools a day or the disease may simulate cholerine or take on the severity of asiatic cholera itself, but the stools do not resemble rice water. During this stage there may be a fetid breath eructations, gastralgia, insomnia, a tympanitic abdomen and febrile symptoms, Fuchs met with a case in which peritonitis occurred.

The symptoms of this stage generally begin about the 3rd day after the introduction, into the stomach, of the infected meat. Leuckart states that he has known severe symptoms to occur in forty two hours, and in other cases to be postponed for eight days. This period of incubation, as it were, is not definitely settled, as to the length of time which may elapse, being influenced by the age of the worm, the state of the cyst and the irritability of the mucous membrane.

*Stage of muscular irritation.*—Usually begins about the 7th day, but is subject to the same variations as the 1st stage. As the trichina enter the muscular tissue, pains simulating those of muscular rheumatism appear; they are generally first perceived in the abdomen and legs, are always increased by motion and by pressure and primary movements are more painful than subsequent ones; the same remark applies to pressure. When muscles performing special functions become affected, special symptoms are furnished, *i. e.* hoarseness and aphonia by those of the larynx, dypnœa by those of respiration, mastication, deglutition and retention of urine by their respective muscles becoming the seat of the worms which paralyze the muscles.

Usually about the 10th or 14th day various portions of the muscular system become swollen, contracted and indurated. Fuchs observes that these symptoms generally begin at the roots of the members and gradually reach their extremities. The sense which these swollen portions presents to the touch, has been compared by Leuckart to that produced by India rubber. The knees and elbows are usually the joints which are first involved in the contraction. The irritation produced by this numerous progeny on the delicate tissues causes febrile phenomena of a typhoid character; there may be rigors followed by heat; thermometer in the axilla shows a temperature of 100° to 105° Fah; there are dypnœa, quick respirations and a frequent pulse usually ranging from 90 to 135, it denotes augmented action, but not increased power of the ventricular systole; the urine is highly colored; furnishes sediments of uric acid, contains an excess of urea, sulphates and phosphates, it is also scanty and of high specific gravity, but according to Leuckart it never contains albumen; anorexia is complete in this stage; the tongue is usually thickly coated with a dirty fur with red tips and edges. Œdema always occurs in this stage of the disease, any part of the voluntary muscular tissue may be primarily affected, but the face seldom or never escapes, indeed the palpebral œdema if well marked is almost pathognomonic. Prof. Dalton maintains that the trichina reach their ultimate destination through the medium of the circulation, that the cysts are formed by the walls of the capillaries and that the œdema is produced by these obstructions to the flow of blood through the capillaries. This, it may be remarked, is the view taken by many of the American, and by some of the French, English and German pathologists and physiologists, but the majority of the English and continental writers, with Virchow and Leuckart at their head, maintain that the circulation has nothing to do with the dissemination of the worms, but it must be confessed that they have not as yet, given a plausible explanation of the cause of the œdema.

Sometimes characteristic symptoms are furnished by the eye *i. e.* pain in moving the ball; diminishing faculty of accommodation, mydriosis; photophobia and a watery state of the conjunctiva.

The irritation, produced by the superficial parts becoming affected stimulates the sudoriporous glands; in consequence of which perspiration more or less profuse is a frequent symptom; vesiculæ when present are most numerous on those parts of the body in which the perspiration is most profuse. It is rare for anasarca to occur in this stage. In adults the decubitus is dorsal, in children diagonal. Should a pregnant woman become infected with the worms, abortion invariably takes place.

*Symptoms denoting an unfavorable course.*—Paralysis of muscles

of special functions are bad omens, complications *i. e.* cerebral congestion; pleuritis and lobular pneumonia. A more asthenic type of the fever; involuntary emission of urine and fœces, feeble thready rapid pulse, respiration greatly increased, metiorism, delirium, carphologia, hiccough, hæmoptae, excessive prostration, death; the latter usually occurs during the fourth week, but may take place as early as the third week or be postponed until the sixth or even longer.

*Modes of Death.*—By coma, this is very rare; By apnœa, this is rare; By asthenia, this is common, the usual mode of death is by a combination of asthenia and apnœa.

Should the disease pursue a favorable termination *chronic trichiniasis* results. This stage begins after the encystment of the worm, generally between the 4th and 5th week. One of the first symptoms to declare convalescence is a copious increase in the quantity of the urine, and a return to its normal properties, coincident with or soon following the change in the characters of the urine, the febrile phenomena begin to subside, the muscular stiffness and pains disappear, sleep is restored, the profuse perspiration ceases; the appetite is very long in returning, muscular weakness remains for months: desquamation of cuticle and baldness of the head are occasional results. It is, especially, during this stage that anasarca, beginning at the ankles is met with; it is due to a hydraemic state of the blood. Should the hair fall off it is restored in from six to nine months, generally in greater abundance than before the attack. It may be remarked, that in the pre-encysted condition, the worm derives its nutriment from the tissue with which it is in direct contact but that it obtains its nourishment, when in the encysted condition, from the contents of the cyst, this is rendered probable by the facts that the cyst is at the outset filled with a substance semi-fluid or semi-solid and has been observed to diminish in size as it advances in age.

When trichinæ become encysted they are said to retain their vitality for an indefinite period. A case is related in Virchow's archives which furnishes some useful information relative to this subject. Prof. Middeldroff, in 1865, while dissecting out a secondary deposit of cancer in the axillary glands of a lady observed that the parts were thickly studded with white granules which by microscopical examination were found to contain LIVING trichina. The previous history of the case showed conclusively that she has been trichinized in the year 1842, twenty-three years previous to their discovery. Dr. Kolopsch remarks "that they really were deposited in 1842 is shown not only by the symptoms then present, but also by the fact of two of her servants having then died suffering from similar symptoms. It is an interesting specu-

lation how far there is any connexion between trichiniasis and cancerous degeneration." The suggestion that the patient had a subsequent attack of trichiniasis may be treated as a fanciful refinement.

(*To be continued.*)

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## THE ONTARIO MEDICAL ACT, AND THE MEDICAL SECTION OF THE CANADIAN INSTITUTE.

### PROGRESS OF THE DISCUSSION.

*To the Editor of the Canada Medical Journal, Montreal.*

SIR.—The following preamble and resolutions formed the substance of the communication addressed by the Secretary of the Medical Section of the Canadian Institute, to the President of the Medical Council, during the last session of that body, held in Toronto, in the early part of April last. The resolutions were fully discussed at a large meeting of the Medical Section, and unanimously adopted :—

"Whereas, the Legislature of Ontario at its last session, did pass an Act respecting the Medical Profession of the Province, in which Act provisions are made to place upon a common ground with ourselves a class of practitioners known as Homœopaths, and an other class who style themselves Eclectics; and, whereas we, as members of a liberal profession, are unwilling to violate our clearly defined principles, by associating with any sect holding views and theories we consider to be absurd and false, therefore, be it resolved :—

That the Medical Section of the Canadian Institute does, in the most emphatic manner, protest against such unprecedented and uncalled for legislation.

*Resolved :* That this our protest be communicated to the Medical Council for Ontario, now in session, with the request that the Council take prompt and energetic steps to secure our release from associations so repugnant."

The communication led to a very animated and prolonged discussion by the Council, and was finally, on motion of Dr. Brouse, laid on the table. During the progress of the discussion, however, it appeared that the Medical Act, as a whole, had but few apologists, while many of the most influential members of the Council repudiated or condemned the measure in very energetic Saxon.

The Medical Section of the Canadian Institute has since held several meetings for the special purpose of discussing the Medical Act, and a Committee was appointed to prepare a deliverance on the question, with

a view to secure the united action of the profession throughout the Province. The committee reported the draft of a circular at a special meeting held on Tuesday evening, the 27th April. Although this circular was not adopted, it may not be out of place to give an extract or two from it, as it is believed to express the prevailing sentiments not only of the Medical Section but of the profession of Ontario. The circular states: "A law has been lately passed by the Legislature of this Province, which, whether intentionally or not, degraded us from the position we once occupied to that of associates of men whom we consider ignorant and every way unworthy of being connected with us. This law brings forward as fellow members with us of the College of Physicians and Surgeons of Ontario, men who know nothing of college walls, nor of the culture we have there with so much labor obtained. Our diplomas, even though conferred by the Universities of the old World, have thus lost their value, and our standing is levelled down to that of men ignorant of their own language and of every other; unacquainted with the natural sciences, even with those most closely connected with the healing art, ignorant of the history of disease and of Anatomy, and hence, unacquainted with Surgery, and Physiology, and Pathology, and for lack of this preliminary instruction unable to comprehend the most apparent facts in the progress of disease." "We have looked at the Medical Act as violating our rights, and degrading us from our fairly earned position. The *folly* of the scheme is as evident as its injustice. Can harmony and efficiency be expected in a council of which one portion denounces the fundamental principles of the other as a tissue of absurdity, and delusion? Is it to be supposed that men, having no confidence in each other's intelligence and integrity, can wisely and truly discuss and decide the grave questions that must come before them? Serious differences will arise even among those best qualified to examine such questions. What may fairly be anticipated when steam doctors and Homœopathists are called upon to decide respecting the establishment of a chair of Pathological Anatomy, for example, in our Medical Schools!"

"An attempt will doubtless be made to convince you that this is the bill asked for by the Committee of the Council. So far is this from being true that the provisions to which we object, and against which we most earnestly protest, were introduced into the Act after the bill was supposed to have received its permanent character. To establish this fact we have the declarations of at least four members of the Council, and these declarations not denied by the Committee, in whose presence they were made. The truth is that these clauses of the Act were introduced by the President of the Homœopathic board and forced upon the Committee

of the Council by the assurance that if these modifications were not accepted, the bill would be thrown out. Yielding to this pressure the Committee of the Council apparently forgetting their duty to maintain and defend the honor and rights of their constituents, accepted the bill thus modified, and consented to associate with these ignorant pretenders to medical knowledge."

The circular, however, portions of which are quoted, was not adopted by the Medical section, as many of the members thought the object we had in view would be attained as well by giving publicity through the press to our first resolutions. The following resolution was thereupon substituted for the circular. Moved by Dr. Agnew seconded by Dr. Hall, and "Resolved: That the Medical Section of the Canadian Institute having already protested against the Medical Act, so far as relates to the coerced union with Homœopaths and Eclectics in a Medical Council for the Province, further, respectfully recommend our brethren throughout the Electoral Divisions who hold similar views with ourselves, to pledge their Candidates for election to the Council to use every constitutional means to secure the repeal of those objectionable clauses." Carried.

While this question was before the Section, a large number of letters from practitioners in different parts of the country were received by the Secretary and other members, cordially endorsing our action. A quotation or two from these may not be out of place. A correspondent from Hamilton says, "I may state that the Physicians of this city (Hamilton) so far as I know their views, condemn the Homœopathic clauses of the Medical Act." "For my own part I have nothing but condemnation for the acts of the Medical Council from first to last, and I think the more they are examined the greater evidence will be obtained against the present Act,—for the representatives of the profession showed how little able they were to discharge the duties they undertook." "I am quite sure the Council's proceedings are not approved by any one who takes the trouble to examine them."

Dr. Ely, Secretary of the County of Perth Medical Association writes: "You have our heartfelt sympathy in regard to your action concerning that hybrid, the Medical Bill. We feel it necessary, in this county, to take united steps to defend our rights against the encroachments of quackery."

A correspondent from Oshawa, County of Ontario, writes:—"I am confident that those clauses in the Bill relating to Eclectics and Homœopaths will be universally condemned, and your protest undissentingly sustained. I know, so far as I can, I will use every means and exert

every influence, directly and indirectly, which will tend to rally opposition to such an obnoxious and infamous production. I look upon it as an abortion and *illegimate* at that. For Dr. McGill to say that the profession knew that such a bill was to be passed, or *even* presented, is simply nonsense, 'monstrous nonsense.' The profession was aware, as I understood it, that a committee was appointed at the meeting of Medical Council, in Guelph, twelve months ago, to draft amendments to the old bill, but it had no idea that that committee could find one so presumptuous as to bring any amendments, or bill before the Legislature without being first submitted to the profession; besides I do not know that there is any evidence to show that the draft of that committee was even submitted to the Council afterwards as a whole. The first intimation I had of any attempt being made to change the medical law, was through the daily papers, *after* the bill had received its first reading, and not until some time after that, had I the privilege oi perusing it. Its features then were, in my opinion, frivolous and meddlesome; as it stands now humiliating and disgraceful."

Letters from Dr. B. Workman and others were received to the same effect, but your space has been, already, I fear, encroached upon too much. To show, however, that the action of the Medical Section, not only roused the Profession of Ontario to action, but received the favorable notice of a portion of the Press, I enclose an article which appeared in the *Leader* newspaper of this city.

* * * * * * * * *

"As we understood it, the Medical Council, about to be created by the new bill, will be composed of three different schools in medicine—three standards of faith diametrically opposed to each other. If these three classes, or sects, hold their opinions honestly, it will be impossible, there should be any compromise between them, and, hence, unity of action, or anything else than discord of an apalling kind need hardly be looked for by the Profession. As a member of the Medical Section of the Canadian Institute well observed, it is as wrong in principle, if not in degree, to attempt to co-erce the different "Schools" in Medicine into a distasteful union, as it would be for the Legislature to attempt to compel religious bodies, differing from each other, to meet in Synod together for united Ecclesiastical legislation. And then, if our correspondent—not without reason—has to complain that the defunct Medical Council conducted its meetings with a plentiful lack of dignity, and so failed to command the respect of either the profession or the public, on what fabric can we base a hope that the discordant elements of which the new Council will be composed shall be in any respect an improvement on the

old? Nay, may we not, without claiming remarkable prescience, certainly predict that, the war of the schools will rage at the Council board, with the edifying result of giving the world a miniature sample of the style in which discussions may be suffered to be carried on in the belligerent regions of Pandemonium."

"For the good of the Profession at large, as well as in the public interest, we regret this forced union of "Schools," and we hope that the selfish aims ascribed to some of the "Manifestors" of the measure, may not be allowed to carry the day, and that the next session of the Legisture will expunge this coercive and improper measure, and give a new and satisfactory charter to the good knights of the Scalpel.—But, why cannot the self constituted allopathic legislators see that their efforts must always be attended with unsatisfactory results both to the public and to themselves, so long as they direct their main efforts to the destruction of the Homœopaths and Eclectics? Are they really so blind as to fail to see that the weaker body, albeit often unworthy of it, will always have most sympathizers, when assailed by the stronger? We are aware that the trap into which many otherwise astute medical men have fallen, is that, the operation of the new act will strangle Homœopathy. Let us examine this position. We find, in the first place, that all medical men, including Homœopaths and Eclectics, are entitled to the same legal privilege. Their names will be enrolled on the same register, and they will become members of the same College of Physicians and Surgeons. While this is the case, a bait is held out to catch student-recruits, in the shorter curriculum of studies, than that required by the Allopathic body. Now, to our mind, these provisions give a very decided advantage to Homœopaths, who instead of being "strangled," as our allopathic brethren charitably hope, have the game very much in their own hands, and we mistake their mettle, if this be not soon made to appear. Let us look at the matter more closely. The Allopaths have all along professed to despise the other sects as ignorant and dishonest; they are now compelled by the levelling up process, to admit them to terms of perfect equality. They appear on the same register; they are members of the same College; they are entitled to be met by Allopaths in consultation. Should Allopaths refuse, the public would sympathise with the *theories* of the new school, against the *prejudices* of the old. They are entitled to admission to the same Societies and Associations as the Allopaths. Should they be excluded, public sympathy would be promptly at their side as the weak and persecuted. Should they be admitted, they will doubtless endeavor to hold up and hold forth the beauties of "*Similia Similibus Curantur*," and, refusal to discuss their dogmas, by the Allopaths, would be con-

strued as an indication of fear for the result; while, to accept the challenge on every occasion, would make medical societies bear gardens, alike demoralizing to the Profession, and unedifying to the public. From every point of view we contend that the diplomacy of the Homœopaths has shown itself superior to that of their self-lawded opponents, in the "Manipulation" of the Medical Act during its passage through the House.

"If the Allopathic body, numbering as they do, the vast majority of the medical men of the Province, and possessing the only educational institutions, would work harmonioulsy with one another and strive honestly for the elevation of their own status, trusting to the march of intelligence and learning for the extinction of quackery, where such exist, rather than Parliamentary enactment and intrigue, public sympathy and approval would far more certainly be accorded to them, and the end they profess to have in view would far more certainly be realized. In the meantime the game of depreciating their own schools, and depreciating one another, can only lead to a lowering of their *prestige*, and the destruction of their influence as a liberally educated body of men."

"Our correspondent is, perhaps, rather sensitive, in regard to the way in which certain members of the late Council spoke of the Medical Section of the Canadian Institute. The fact that the communication from the Medical Section,—though, perhaps, not worded as judiciously as it might have been—created such a commotion, and led to such a long, as well as stormy wrangle or debate, is sufficient proof that the Council had more regard for the Toronto Medical Society, than they were willing, in so many words to admit. The Medical Section has sounded a key note, in regard to the new act, and we mistake much, if it will not be promptly taken up, and echoed and re-echoed by the profession of Ontario."

Holding a sort of official position, as Secretary of the Medical Section I was advised that it would not be uninteresting to your general readers. Mr. Editor, to get a *resumé* of the discussion, on the Ontario Medical Act, so far. And, as the character of the profession in Ontario, seems, for the time being, to be jeopardized by the recent indiscret Medical Act. it is not perhaps, altogether unbecoming, to seek, through the medium of such a journal as yours, to vindicate our consistency and adhesion to principle before the world.

I have the honour to be, Sir, your obdt. servt.,

J. N. AGNEW,

*Secretary Medical Section Canadian Institute.*

TORONTO, May 20, 1869.

## REVIEWS AND NOTICES OF BOOKS.

*A History of the Medical Department of the University of Pennsylvania from its foundation in* 1765 *with sketches of the lives of deceased professors.* By JOSEPH CARSON, M.D., Philadelphia, Lindsay and Blakiston 1869. Montreal, Dawson Brothers.

To all the *alumni* of Pennsylvania University, this Volume will possess peculiar interest, giving in a comparatively moderate compass, the history of their *alma mater*. To the profession at large, however, it possesses considerable interest, from the fact that several of the introductory chapters are devoted to a detailed account of the first Medical teaching ever attempted on the American continent. After reading Chapter 2 we could not help contrasting the position of a Medical teacher to day with his hundreds of pupils, and that occupied by them over a hundred and ten years ago. It is a very readable book, the style being pleasant, and its perusal serves to pass an agreeable hour or two.

## PERISCOPIC DEPARTMENT.

### Surgery.

#### SECTION OF ANTERIOR TIBIAL NERVE FOR NEURALGIA.

The first section of this nerve recorded, so far as we are aware, was made on New Years day of the present year, by Dr. James E. Garretson, of Philadelphia, under the following circumstances.

The patient, Samuel Banning, of Kingsessing, a soldier in the war of the rebellion, received three wounds, one in the shoulder, one through the calf of the right leg, the third through the right foot, involving the metatarsal bones; this last requiring thirteen months in hospital for its cure

About two years back, pain more or less severe was found to be associating itself with a sense of exhaustion, which over-exercise always produced in the foot; this pain gradually increased until finally it passed up to the knee-joint and there settled about the head of the tibia, and on the outer aspect of the limbs on the line of the peroneal nerve. When first seen by Dr. Garretson, the patient had been confined to his room for eight months, being fully two-thirds of this time in a state of dementia, requiring constant attendance to prevent the commission of suicide, which he would attempt in any manner within his command if left for

a single hour unguarded. The tenderness about the head of the tibia was so excessive that the most limited handling would throw him almost immediately into spasms; there was little or no tenderness about the foot or lower third of the leg, and no special point o pain at any place.

In the case, six weeks were spent in deciding the diagnosis, which finally being determined to be a lesion of the anterior tibial nerve produced by some sequences secondary to the wound of the foot, Dr. G., with the assistance of Dr. Hooper, of Kingsessing, on New Year's day, operated by cutting down on the vessels one and one-half inches above the annular ligament, separating the nerve from the artery, and removing one inch from its continuity.

*Result.*—The operation was performed at 11 A. M.; at 11½ the patient fell into a sound sleep, which continued until 5 P. M., the first sleep of over half an hour duration which he had enjoyed for a period of six weeks; from this sleep he awoke refreshed, without pain, and in every respect, mentally, quite himself. The wound which had been approximated, to unite by the first intention healed thoroughly throughout, looking in every respect well for a period of one week, at the end of which time it opened and assumed an erysipelatous appearance, several blebs appearing in its immediate neighborhood; these however yielded at once to an application of iron and quinine locally, and to gentle unstimulating poulticing; the wound, however, continued slightly to suppurate, being fully six weeks in healing.

The toes, which, at first, were almost, though not quite, deprived of motion, gradually, after the first few days, recovered themselves, and now seem none the worse for the operation.

The principal discomfort complained of after the section was in the ankle-joint, this having a constant sore feel, and being weak and unreliable; a series of very small cutaneous abscesses, of little moment, however, exhibiting the abstraction of the wonted nerve supply.

Of the original pain the patient, however, never had one twinge after the section, the tenderness about the knee-joint disappeared in three days; the man at this date, three months after the operation, is attending to his business as usual, the only complaint being that the foot operated on, tires before its fellow.

A second case of quite as much interest is also reported by Dr. Garretson, of section of the incisive branches of the superior maxillary nerve, where they pass down the wall of the antrum. In this case the patient, a lady, wife of an undertaker, had been suffering periodic attacks of pain about the head and face. This patient, exceedingly quiet and retiring, spent most of her life in sunless rooms surrounded by the melan-

choly paraphernalia pertaining to her husband's business; she was anemic and of poor health and spirits. Although this patient had certain bad teeth, yet the pain had never seemed associated with them; indeed, so insensible where these organs to ordinary agents of irritation, that a diagnosis had been founded alone on her general condition and surroundings, and remedies applied entirely in such direction. Tonics were administered, exercise and amusements conjoined with generous living were advised, but with even this entire change the patient grew constantly worse. The diagnosis discovered to be thus at fault, the teeth were extracted, still the condition persisted and the pain increased. She was now kept under treatment over a year, the pharmacopœia being literally exhausted. "At this period, in consultation, I made a most thorough examination of her system. The pain had assumed and continued the impression of an iron clamp around the head terminating at the chin below, and which clamp seemed daily contracting itself; the terror and pain of this impression had become so great as to convert the patient almost into a lunatic. First, was there any remaining tooth or roots of teeth implicated? I examined for dental caries, for pulpitis, for nodules, for necrosis, for supernumerary teeth, for exposed cementum, but fully assured myself that the dental organs were not at fault. I examined the spinal cord, and through its expressions the encephaloid mass. Organically, the trouble was not reflex from these points; finally I returned to the old cavity; the teeth, which had been extracted the year before were the molars and premolars of the left superior jaw; might there not possibly have been left just the smallest particles of one of these roots? I was making pressure over the canine fossa when the patient made slight complaint; it was the only point which had yielded difference in sensation; it was not pain of which complaint was made—not discomfort, it was simply a difference of sensation. What was the meaning of this? differentially, it was just to infer that here existed something, the lesion perhaps of which we were in search. Acting on this only hint, I obtained the consent of the physician in attendance to make an exploratory trephine into the antrum, and on performing the operation, discovered within the cavity that branches running from the intra orbital nerve across it had enlarged to the size of an ordinary knitting needle; these enlarged nerves, of which they were two, I cut away; the patient was immediately relieved, and although a year has passed, she has had no return of the neuralgia, at least so far as I am aware, and I have since met her upon the streets, looking rosy and fresh."—*Philadelphia Medical and Surgical Reporter.*

## FINAL HISTORY OF A CASE OF SEVERE INJURY OF THE BRAIN.

This case was originally reported in the *American Journal of the Medical Sciences*, for July, 1850. The accident happened in Vermont, in September, 1848. The patient, a man 25 years of age, had a pointed iron bar, used for a "tamping-iron," three feet and a half in length, and one inch and a quarter in diameter, driven through his head by the premature blasting of a rock. The bar entered the left side of the face, just in front of the angle of the jaw and passed obliquely upward, inside the zygomatic arch, and through the anterior part of the cranial cavity, emerging from the top of the frontal bone on the median line, just in front of the point of union of the coronal and sagittal sutures. The patient was at first stunned, but soon recovered himself so far as to be able to converse intelligibly, rode home in a common cart, and with a little assistance walked upstairs to his room. He became delirious within two days after the accident, and subsequently remained partly delirious and partly comatose for about three weeks. He then began to improve, and, at the end of rather more than two months from the date of the injury, was able to walk about. At the end of sixteen months he was in perfect health, with the wounds healed, and with the mental and bodily functions unimpaired, except that sight was permanently lost in the eye of the injured side.

It now appears that he subsequently removed from Vermont, and, after living in several different places, went to San Francisco in 1859. In 1861, he was attacked with epilepsy, and died in May of the same year, twelve years and a half after the receipt of the injury. His skull was recently procured, and presented to the Warren Museum of Harvard College.—*New York Medical Journal.*

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## THE EXAMINATION OF THE BLADDER.

By J. Matthews Duncan, M.D.

Although the diseases of the bladder have been the subject of much observation and study, and much has been written concerning them, I am not aware that in any quarter the physical examination of the bladder is described with the care and fulness which it appears to me to deserve. I am satisfied that attention only requires to be called to it to secure for it the consideration it merits, forming, as it does, a valuable addition to our means of diagnosis, that may be available in many difficult cases.

No special instrument is required for the purpose. A rigid female catheter is scarcely long enough, but may suffice, especially if it is well

closed by its stilet. I use a metallic vesical sound, that has, about one inch from its extremity, a curve which joins the two parts separated by it at an obtuse angle. The instrument must be rigid, so as to be pushed with a little force without yielding. Its point should be rounded and blunt, so that it may not easily injure the walls of the bladder, or cause pain in a healthy organ. It is convenient to give it a flat, button-like handle, and a total length of about twelve inches.

The conditions which this instrument, used by the fingers of a skilled practitioner, should discover or investigate are the following:

1. The tenderness of the bladder.
2. The length of the bladder.
3. The state of the walls in respect of softness or distensibility.

Each of these subjects will require some separate consideration. When the whole are correctly made out in any case, the results, cannot fail to be of practical value to the practitioner who knows how to make use of them.

The operation of conducting this investigation must always be made with tenderness and care, and, in a case where much pain is anticipated, only after a decision, duly arrived at, and founded on a just appreciation of the features of the case, that the investigation will probably yield results justifying the infliction of the pain and alarm usually excited.

### 1. *The Tenderness of the Bladder*

This tenderness must be, if necessary, distinguished from tenderness arising from pressure by the instrument on the neighboring inflamed parts. It is seldom difficult to do so; for, first of all, such inflamed parts can be previously and otherwise made out, and their position avoided in manipulating the instrument, or their presence allowed for; but, secondly, it is found in practice that even the compression of the bladder by neighboring inflamed masses does not prevent the careful examiner from investigating the state of the bladder without interferences from such sources of error. This last statement is often remarkably verified by the absence of vesical tenderness under such circumstances.

In cases of gonorrhœa, or in any others in which there is urethritis or urethral tenderness, a greater difficulty is introduced by this complication than by the former. For the pain of passing the instrument is great; if present, it anticipates the eliciting of vesical tenderness, and accompanies it when elicited: it causes expressions of pain even when vesical tenderness is absent, and the patient is generally too intent on her feelings to submit to questionings regarding any difference in locality of the urethral and of the vesical pains. But this difficulty is to a great extent

overcome by remarking the great increase of pain produced in touching the vesical walls in such cases as those of gonorrhœal cystitis.

Catarrh, or irritability and inflammation of the bladder, are the conditions in which tenderness is always great, sometimes intense; every touch of its walls, every motion of the instrument, causing a cry of agony. This is what is naturally expected; and it is, I believe, invariably found. But it is not a rare occurrence to discover total, or nearly total, absence of tenderness in cases where catarrh or inflammation was believed to be present. In such instances, nothing can be much more important than to find the absence of tenderness. The diagnosis is corrected. The practitioner points his inquiries in a new direction, finds out the hidden seat of disease, or at least has a more accurate idea of the nature of the case under his care.

Cases illustrating this statement have frequently occurred in my practice.

It is only necessary to name the difficulty, often occurring in urinary cases, of deciding between the kidney and the bladder as the source of the symptoms, to show the valuable aid that may be acquired by ascertaining the state of the bladder as to tenderness and other conditions.

The healthy and many diseased bladders can be examined by the sound fully without any complaint of suffering being made, far less any cry of pain. It is needless to say that many women, easily frightened, can scarcely believe that they are not suffering when under the examination, and disquiet themselves greatly. On the other hand, I can say that I have often examined the bladder in women without their being aware that any thing had been done. I have been asked when I intended to begin, when the examination was already completed.

I have examined a bladder which had no notable sensitiveness, which was believed to be only compressed and slightly irritated by neighboring disease, but which was really the subject of cancer, having several large and bleeding projections in its interior. These were indistinctly felt; but the absence of pain on examination misled me as to the condition of this bladder. At that time I did not know that a bladder so extensively diseased and disorganized could be examined by the sound with so little suffering.

### 2. *The Length of the Bladder.*

By the length of the bladder, I mean the length of the sound which passes into it. I measure the length from the external orifice of the meatus urinarius; and, in giving measurements, I understand the point of the instrument applied to the top of bladder to be one extremity of the measured line, and the external orifice of the meatus urinarius to be

the other limit. Of course, for anatomical exactness' sake, the length of the urethra should in every case be subtracted from the measurement. But, as in no case can the length of the passage be ascertained, I do not attempt to subtract it, and therefore give the whole length of bladder and urethra.

This length, besides its own immediate value, which I shall attempt to display, is also of use as contributing to an estimate of the capacity of the organ, a quality which it is very difficult justly to appreciate—for it is very erroneous to suppose that the quantity evacuated, when the bladder is said to be full, gives, in every case, a reliable measurement of the capacity of the organ. The quantity evacuated from a healthy bladder varies under a variety of circumstances, especially the condition of the retentive power of the abdomen. It is generally, like the air expelled in an expiration, only a certain overflow produced by vesical contraction and the bearing-down effort, and may be a greater or less amount, according to the intensity of these actions. Sometimes, even while there is a vesico-vaginal fistula of no small dimensions, and a relaxed vagina, a large quantity of water accumulates in the bladder. After delivery, it not rarely happens that, in a case of retention, the urine ceases to flow through the catheter when the recently-distended bladder is not half-emptied. At such a time, the cessation from the bearing-down which has half-emptied the bladder may lead to air regurgitating through the catheter into the bladder. The further emptying of the bladder, in such a case, is effected by continued powerful straining, or pressure by the hand on the brim of the pelvis substituted for it. It is not my purpose to discuss fully the measurement of the capacity of the bladder. I have said enough to show that the amount evacuated is not, in general, a reliable indication of capacity. I believe that, in cases of irritation and inflammation, it is more to be depended on than in health; but, in all cases, the length of the bladder will afford important aid in estimating the bulk of contents.

When a woman passes a large quantity of water at once, she must have a capacious bladder; but when a woman only and always passes a small quantity, that circumstance is in itself not sufficient to prove that her bladder is of contracted dimensions.

When, from so-called paralysis of the bladder, the urine is retained, the bladder assumes enormous dimensions. In such circumstances it is well known that, besides involuntary dribbling, the urine is in many cases passed at regular intervals, as in health, but in small and insufficient quantity. The circumstance of the bladder being habitually and naturally only partially emptied, which I now point out, occurs in cases both of

health and disease. Partial emptying is itself no sign of disease, nor a sign of exaggerated capacity.

It is, then, necessary to keep in mind that it often happens that a woman is frequently micturating, and yet never nearly emptying the bladder. It is this circumstance that, in certain cases, especially those where the urine is decomposing in the bladder, gives great value to the operation of washing out the bladder; and the opposite condition of very complete evacuation sometimes renders the operation of washing unnecessary, and, it may be, injurious.

The healthy bladder cannot be measured as the uterus is, or as the hard, diseased bladder may be—for the sound on reaching the summit of the cavity meets, in a healthy organ, with a soft wall, which can be pushed away before its point, sometimes to the extent of an inch; but a healthy bladder, gently pressed by the sound, measures from five to six inches. The measurement cannot be more precisely given, on account of the distensibility just mentioned.

In cases of disease, the bladder is often found very greatly exceeding this length, as in retention. A young girl, not yet arrived at the age of puberty, had all her life wetted her bed involuntarily. At no time had she the natural feeling of desire to make water, and it was only by emptying of the bladder by straining that she avoided wetting herself in the daytime. Whether the theory of the case be right or not, the treatment founded on it was successful. The dimensions of the bladder were diminished, and its natural sensibility restored.

In ordinary cases of catarrh or inflammation of the bladder, examples are found of diminished length of the bladder, and a very common dimension is four inches. A case having a less measurement is surely a grave one on that account, and *vice versa*; a case having a measurement above four inches is, so far, a favorable one, inasmuch as cure will be more easily and more rapidly attained.

In cases of severe acute cystitis, the capacity of the bladder is sometimes entirely destroyed. There is naught but a potential cavity, or only one capable of containing a few drops of urine, which are soon expelled with acute pain. The sound cannot be passed further than the urethra, that is, about an inch. If, while the patient is under the influence of an anæsthetic, a moment of vesical relaxation is waited for, the sound will pass to the top of the bladder, entering little more than two inches.

In some cases of urinary calculus, the bladder has no capacity for urine, or only the very smallest, the stone filling completely the irritated organ.

In cases of inveterate chronic cystitis of the worst kind, I have found the bladder to measure little above two inches.

Besides indicating the actual state of the bladder at any given time, measurements at successive periods, showing increase or decrease of dimensions, are valuable and very reliable indications of gradual aggravation or amelioration of the cases. And this indication I have frequently availed myself of in practice, with great satisfaction.

3. *The state of the Walls in respect of softness or Distensibility*

Examination by the sound informs the surgeon as to the shape of the bladder. It sometimes also gives information regarding the condition of the walls as to smoothness, or roughness, regularity or irregularity of surface. A bladder, the subject of malignant disease, may present nodosities on its surface, which may be more or less distinctly felt by the examiner. A bladder, the subject of chronic cystitis, may present an irregular surface, from the projections of bands of muscular fibres lying in various directions.

But a more generally discoverable quality of the walls of the bladder is their condition as to distensibility. The inflamed bladder soon becomes not only small but also hard or indistensible, and this condition can be appreciated by the sound. It is well marked in all cases of contracted bladder. It is remarkably absent in a healthy organ.—*Edinburgh Medical Journal.*

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# Medicine.

## THE VALUE OF MEDICINE.

Sir Thomas Watson, in retiring from the presidency of the Clinical Society of London, gave a very appropriate as well as very brief address, from which we extract the following sensible remarks:

It seems to have been thought, in some quarters, that I had renounced my faith in physic—that I undervalued the resources and the usefulness of our art. Such a motion is the very reverse of the truth. I am anxious to have the effects of remedies carefully ascertained and certified, just because I have so great faith in their real force. What I deprecate, what I would fain see altered, what it is one great end of this Society to do away with, is the vagueness of aim, the uncertainty of result, the merely tentative nature of too many of our prescriptions. Far from thinking that our warfare with disease is a vain warfare, I am only desirous that our arms should have the precision of the modern rifle, instead of the wild flight of the old-fashioned smooth-bore. Probably I

have even greater reliance than many physicians upon the virtues of drugs—of what used to be called simples—a word I like, because it helps continually to suggest to one's mind the golden rule, that their administration should be simple; that they should be mixed as little as possible with other substances which might confuse and vitiate the conclusions to be drawn from their actual operation. I am one of those who hold to the doctrine—always within its proper limitations, the limitations assigned by Bacon—the doctrine of final causes, so despised by modern philosophy. I believe that those subtle essences which human research and ingenuity have succeeded in deriving from various substances in nature, and which, when applied to the human body, sometimes even in very minute quantities, have a potency so marvellous as to abolish pain, to compel sleep, to extinguish fevers, to stop for long, perhaps for ever, the recurrence of paroxysms of epilepsy which had continued to recur for years, were implanted in those subtances by the Creator, among other uses, it may be, for these very services to mankind, and that there lie concealed in other substances, and especially in the vegetable kingdom, many analogous healing powers, which it is a part of man's mission and privilege, and will be his great reward, to search after and to discover.—*Medical Times and Gazette.*

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## ATROPIA AS AN ANTIDOTE TO PRUSSIC ACID

In the *Practitioner* for August, 1868, is an article by M. W. Preyer, on the toxicological action of prussic acid. His experiments lead him to the conclusion that in comparatively *moderate*, though fatally poisonous doses, prussic acid acts by suddenly and completely depriving the blood of its oxygen. Obviously, then, the first object is to resaturate the blood with oxygen as quickly as possible. In *very large* doses, prussic acid paralyzes the heart, and is obsolutely fatal. These observations led M. Preyer to believe that the true physiological antidote for prussic acid was an agent which (without producing any other important poisonous effects) would paralyze the peripheral branches of the vagus in the lungs and in the heart; and, on the other hand, stimulate the central nervous apparatus of respiration in such a manner as to produce rapid respirations. He now makes the very important announcement, that sulphate of atropia acts precisely in this way, and he has demonstrated on rabbits and guinea-pigs, that the subcutaneous injection of a *very small* dose of this agent, if performed quickly after the injection of the prussic acid, is an *unfailing antidote.*—*Half-yearly Compendium of Medical Science.*

### SULPHITE OF SODA IN CHRONIC CYSTITIS.

Mr. L. Wilcox, late house surgeon of King's College Hospital, recommends the use of sulphites in those cases of chronic cystitis where the urine decomposes before it is eliminated. He finds that by the employment of sulphite of soda all the putridity disappears, and the urine becomes clear and colourless.—*The Practitioner.*

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## Midwifery and Diseases of Women and Children.

### SULPHURET OF POTASH IN WHOOPING COUGH.

Dr. Mackelcan, Hamilton, Ont., was led, from a notice of it which he saw in a French Medical Journal forty years ago, to try this remedy. and his success with it has since been such that he has used no other. He administers it in a mixture of one part of syrup to three of *distilled or rain water*, "the dose being one grain for each year up to four years of age, and after that a half a grain additional for each year; the smaller doses being administered in a teaspoonful of fluid, and the larger more diluted, in proportion of the quantity of the salt in each dose."

"Its beneficial effects are not perceived for five days, when the intervals between the paroxysms of cough become longer, and after that their violence diminishes from day to day, until at the end of ten or fourteen days it is seldom necessary to pursue the treatment further.

"As the drug easily spoils by keeping, it is important to have it fresh. If it dissolves perfectly in the syrup and water, and the mixture is of a greenish colour, it may be relied on; but if there is any sediment, it has been decomposed by exposure to air, and becomes a sulphate."—*New York Medical Journal.*

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### THE USE OF CHLORATE OF POTASH AS A PREVENTIVE IN ABORTION.

At a late meeting of the Medical Society of the County of New-York, Dr. Fordyce Barker strongly recommended the chlorate of potash as a preventive of abortion resulting from fatty placenta. This remedy was first suggested by Dr. James Y. Simpson, on the ground that its oxygen-producing power would render it beneficial in this class of cases. Whatever may be the truth of this chemical theory, clinical experience has convinced Dr. Barker of the value of this remedy. He related several remarkable cases of success with it after repeated abortions. Patients themselves frequently notice the effects of the remedy on the movements of the fœtus.

As a cause of abortion he considers plethora, and nervous irritability as being rather secondary than primary manifestations, and has little

faith in preventive remedies directed against them. To toxœmia and chloro anæmia he attaches more importance, and very generally directs exercise in the open air, with good diet, mild stimulants, and tonics where necessary. These, he says, with the confidence of hope, will often bring a pregnancy to a happy termination after repeated abortions.—*Exchange.*

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## THE TREATMENT OF CROUP

The *Wiener Medizinische Wochenschrift* is publishing an extended series of articles entitled "Croup, Diphtheritis, Pseudo-croup, and allied affections of the Pharynx and Larynx, after the Clinical Lectures of Professor OPPOLZER, of Vienna." Croup and diphtheria are treated as two entirely distinct diseases by Professor Oppolzer, and croup is regarded as a local disease. From one of the numbers, viz., of October 3d, 1868, p. 1289, we make the following extract embodying his treatment of croup. In the beginning, cold compresses are applied to the throat, which are covered by a dry cloth or oiled silk, and changed only every three hours. A tablespoonful of the solution of three grains of tartar emetic, in two ounces of water, is given every fifteen minutes, until repeated vomiting follows. Generally tough mucus and ring-shaped membrane are expectorated, with relief to the child. After the emetic, one of the following powders is given every hour:

℞. Hyd. chlor. mit.,
Pot. iodidi, a a . . . . . gr duodecim.
Sacch. alb., . . . . . oz. unam.
M. exactissime f. p. div. in dos. æquus duodecim

After the first powders the children usually continue to throw up pseudo-membrane. Then the vomiting ceases, and the condition improves gradually. When the croupy paroxysms and dyspnœa return, which in most cases occurs, the emetic is repeated. In cases of difficult expectoration of the membrane, the vapor of hot water is caused to be inhaled, with or without the nebulizer, and the powders continued. If this treatment is unsuccessful, and the paroxysm and apnœa are about to return for the third time, tracheotomy is to be performed without further delay.

Prophylactically, Professor Oppolzer is against keeping children who have once had croup constantly housed up, and spoiling them by too warm clothing; but advises care in observing the wind, and to protect them from the rain, north or northeast winds. Such children should not be outside of the house after sunset. He also recommends cold washings of the throat and chest, with the precaution to dry the skin carefully thereafter, and to prevent the children from exposure to raw temperatures soon after such washings.

# Canada Medical Journal.

MONTREAL, MAY, 1869.

## THE "MEDICAL COUNCIL OF ONTARIO" AND THE "CANADIAN INSTITUTE," OF TORONTO.

In our last issue we gave an account of the proceedings of the Medical Council of Ontario at its last and final meeting; at the time we refrained making any comments believing that our observations would be more appropriate in the present number of the journal. It will be remembered by our readers that a communication was received by the Council from the Canadian Institute, the oldest scientific body in Ontario, which numbers among its members the leading scientific and literary men of the country. We publish elsewhere a letter from Dr. Agnew, the Secretary of the Medical Section of the Canadian Institute, which will well repay perusal.

We were not at all surprised at the manner in which that communication from the Institute was treated by the members of the Medical Council. The proceedings of the Council as reported in our last number were throughout undignified; this is the very mildest expression which can be applied, if we said that they savoured rather of low billingsgate, it would be nearer the truth; and these are the representatives of the Medical profession in Ontario. Surely our brotheren in the West should weed their Medical Council of some at least of the present members. The late Council was the most anomalous lot it was ever our chance to read about; their President in his address very properly alluded to their great mission, that of raising the standard of the profession so that it might "occupy a place of power, of pride and of distinction in the Dominion," and the words were hardly past his lips, the joyful sound of the cheers which greeted him had hardly died away in the distance, ere one of the Council, Dr. Clarke of Guelph, arose and suggested the propriety of receiving to their bosoms several Homœpathists who were outside the bar, that they might take "their place along with the members of Council." We presume the suggestion of Dr. Clarke was adopted, as a Dr. Campbell immediately thereafter addressed the meeting as representing the Homœopaths. But to be serious this report would, if relieved of its slang, far better grace the pages of *Punch*, *Diogenes*, or some comic sheet, than

those of a sober minded medical periodical; we felt at first inclined to cut it out, but in acting thus we would have done an injustice to many of our readers. Referring again to the communication submitted by the Canadian Institute we were not surprised that the Council should have refused to dicuss its principles, when we consider the hearty vote of thanks passed by the Council to their Committee, who had the management of working the bill through the House.. Their were not wanting members of the Council, who manfully stood out against this Bill and its objectionable clauses; others again, and we regret to say the large majority of that body, supported and lauded the provisions of the Bill, and some even went so far as to eulogise the sapient promoters as public benefactors. All who opposed their views were either foolish, or contemptible, or impertinent, or gave utterance to "nonsense, monstrous nonsense." The Canadian Institute was characterised as an insignificant society; they were taunted with making a little God of their President, and the Delegates from the Institute were informed in child like language by one member that the Council did not care about him. These are the men many of whom again seek the support of the members of the profession; they again ask for re-election from that body of gentlemen whom they have degraded and outraged. We hope the Profession will in time wake up to a sense of its own dignity, and by unmistakable and united action prove to those individuals that they are not safe custodians of the honour and welfare of the Medical Profession of Ontario.

If our brethren in Ontario wish to retain the respect of the profession in other localities, they must in the most decided manner separate themselves from all connection with Homœopathy and the other imposture Eclecticism. It remains to be seen what action the "Canadian Medical Association" will take in reference to this Act. The introduction of this measure was hasty and illjudged and it is to be regretted that the Medical Council of Ontario did not wait for the action of our national Association on the subject of medical reform. Meanwhile we cannot but regard the position of the whole profession in Ontario as humiliating in the extreme; nor do we envy the individuals who were instrumental in procuring the passage of the Ontario Act, which is equally a disgrace to themselves and to the Statute Book. We give the communication from the Secretary of the Canadian Institute, in another portion of the Journal.

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## CANADIAN INSTITUTE, TORONTO—MEDICAL SECTION.

A meeting of this Society was held on Wednesday night, April 7th, for the purpose of considering the new Medical Bill in regard to its effects on the state of the profession. On motion Dr. Thorburn was called to the

chair, in the absence of Dr. Hodder, who was unavoidably detained. The chairman called upon Dr. Agnew, the secretary, to read the report of the committee appointed at the last ordinary meeting of the section, for the purpose of preparing a resolution on the Medical Bill. The committee reported the following preamble and resolutions :—Whereas, the Legislature of Ontario at its last session did pass an Act respecting the medical profession of the Province, in which Act provisions are made to place upon a common ground with ourselves a class of practitioners known as Homœopaths, and another class who style themselves "Eclectics," and whereas we, as members of a liberal profession, are unwilling to violate our clearly defined principles by associating with any sect holding views and theories we consider to be absurd and false, therefore, be it resolved, that the medical section of the Canadian Institute does, in the most emphatic manner, protest against such unprecedented and uncalled for legislation. Resolved—That this our protest be communicated to the Medical Council for Ontario, now in session, with the request that the Council take prompt and energetic steps to secure our release from associations so repugnant. On motion of Dr. Canniff, seconded by Dr. Rolph, the report was unanimously adopted. The meeting, which was large and influential, was then adjourned.

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## TRICHINA SPIRALIS.

Cases of Trichiniasis have occurred in several parts of Canada. In the present issue we give an article from the pen of Dr. Edwards, of our city, accompanied by a photograph of the worms, as found in ham, and human muscle. His observations are based on the College street cases, which have been proved beyond a doubt to have been caused by the ingestion of infected ham.

To our own mind the history of these cases, as given to us by the attending Physicians, was clear and satisfactory. Subsequently, at the request of Dr. Bessey, we removed a portion of muscle from the calf of the leg, in two of the patients who had recovered. In the one instance about five grains of muscular tissue was extracted from the lower part of the gastrocnemius; in the other about twelve grains was removed from the tibialis posticus muscle, and in both of these portions of muscle, some forty worms were found. The microscopic investigation was conducted separately, by Drs. Edwards, Howard, Girdwood and Fenwick, and in each instance with a successful result. This must be considered as conclusive evidence of the correctness of the views entertained of the nature of these cases from their very outset; even had we not the fact before us, of

the parasites having been demonstrated by two of the gentlemen above named, in portions of the ham which had been eaten by the parties, and which had been submitted to them for microscopic examination. We have been promised a report of the cases, which will appear in our June issue.

## PROSECUTIONS FOR MAL PRACTICE.

We purpose expressing our opinion on several cases of prosecution for malpractice, which have engaged the attention of our courts of law in the several sections of the Dominion. Our columns are so crowded that we are forced to reserve these observations for a future issue.

## THE ACTION AGAINST DR. STEPHEN FOR MALPRACTICE.

In this number of the Journal we devote some few pages of our space to record the judgment rendered by Judge Johnson in the case where a person the name of Craig sued Dr. Alexander D. Stephens, of Dunham Flats, for $5000 damages, for gross negligence and unskilful treatment of a fracture of the right thigh bone of the plaintiff's wife. It is some few months since it was delivered and it was due entirely to an accident that it did not appear at the proper time. It has not, however, spoiled by the delay, and is perhaps even more appropriate now, as we regret to notice at the present time a sort of mania for suits of this kind. The charge will well repay perusal.

### DISTRICT OF BEDFORD—SUPERIOR COURT.

John H. Craig, Plaintiff, *v.* Alexander D. Stephens, Defendant. Final judgment was rendered in this case by the Superior Court at Sweetsburgh on the 18th instant, when His Honor, Mr. Justice Johnson, read the following remarks and exposition of the case:—

"This action is directed against a Surgeon for the recovery of damages to the extent of $5000 by reason of his alleged 'grossly ignorant negligent and unskilful' treatment of a fracture of the right thigh bone of the plaintiff's wife. It is answered to this demand that the treatment pursued was not negligent or unskilful, but on the contrary, as skilful and in point of fact, as successful as the circumstances permitted. The extent of the injury complained of is a considerable shortening of the limb, and the Plea admits that this contraction, which always takes place to greater or less extent, according to circumstances in cases of this description, might probably have been diminished by treatment which he would have followed but for the peculiar features of complication presented in this

instance, and the urgent request and entreaty of the patient for present relief. The case then presents the simple issue that is generally tried in such cases as far as the question of malpractice is concerned, and further puts forward the position that the treatment followed, whatever it may be considered to have been, was a treatment adopted at the instance and request of the patient herself. The principles upon which such cases depend possess nothing recondite or contradictory. The precise extent of the liability of practitioners is settled and defined in a series of English decisions, spread through the reports and presenting with every conceivable variety of circumstances, no material variation of doctrine. The rules of the French Law and of the Civil Law are the same as those adopted by the English Courts and by the Tribunals of the United States; *vide* Denizart, Guyot's Repertoire, Bell's Commentaries, Story on Bailments, and the 2 vol. of Kent's Commentaries. In a case of Leighton against Sargent, 7 vol. of Foster's New Hampshire Reports, page 460, the authorities from all these sources are conveniently referred to, and the ruling of the Court in that case laid down and enforced in an admirable manner the plain propositions of law upon which the liability of medical men was by that Court, and by all the decisions and authorities there cited, held to depend. These plain principles are adopted and followed by this Court in the present case, and are as follows:—A Physician's contract, as implied in law, is 1st. That he possesses that reasonable degree of learning, skill and experience which is ordinarily possessed by others of his profession. 2nd. That he will use reasonable and ordinary care and diligence, in the treatment of the case committed to him. 3rd. That he will use his best judgment in all cases of doubt, as to the best course of treatment. He is not responsible for want of success, unless it is proved to result from want of ordinary skill, or want of ordinary attention and care. He is not presumed to engage for extraordinary skill, or for extraordinary diligence or care. He is not responsible for errors of judgment or mere mistakes in matters of reasonable doubt and uncertainty.

Story 433,on Bailments. Tindall, C. J. Lanphier & Phipos, 8 c. & p—p. 475.

"To charge a physician or surgeon with damages on the ground of "unskilfull or negligent treatment of his patient's case it is never enough "to show that he has *not treated* his patient in that mode, nor used those "measures which, in the opinion of others, even medical men, the case "required, because such evidence tends to prove errors of judgment for "which the Defendant is not responsible, as much as for the want of reasonable care and skill for which he may be responsible. Alone it is not

"evidence of the latter, and therefore the party must go further, and "prove by other evidence that the Defendant assumed the character and "undertook to act as a physician, without the education, knowledge and "skill which entitled him to act in that capacity. That is, he must show, "that he *he had not reasonable and ordinary* skill, or that having it "neglected to apply it." The principle of the common law of England as to the engagement of the professional man for *a reasonable degree* of skill and *no more*, has been settled in the case of Physicians and Surgeons in Seare *vs.* Prentice. 8, East 347. Slater *vs.* Baker, 2 Wils., 359. Moore *vs.* Morguecowpt, 497. Hauke *vs.* Hooper, 7 c. & p. 81. Lanphier *vs.* Phipos. 8 c. & p. 475. Bell's Comm. 459.

Many cases in England deny the liability of professional men even to this extent, since they decide that the Surgeon or the Attorney shall not be held responsible except for *lata culpa*, or *crassa negligentia*, manifest fault or gross negligence. Godfrey *vs.* Dutton, 6 Bing 461.

Legh. Nisi Prius 196.

We now come to consider the evidence adduced in this case :—

It is extremely voluminous, no less than twenty-eight witnesses having been examined on one side and the other—and amongst them are eight doctors. Four examined on behalf of the Plaintiff and four by the Defendant.

Plaintiff's Doctors: Gibson, Chamberlin, Brown, and Brigham.

Defendant's Doctors: Cotton, Rowell, Valiquet, and Belhumeur.

It appears that the Defendant was unwell and unable to attend when first sent for after the accident had occured, and that a Doctor Gibson was the first Surgeon who saw the patient. He found her in bed with her thigh bone broken; it was a simple fracture. He placed the limb in an extemporaneous double inclined plane which he made at the time. He returned the next day, having been sent for before he was out of bed in the morning. He went again the third day and on entering the room where the patient was, he saw that the apparatus had been removed from the leg, and another substituted, and was told that Defendant had been there the previous evening and had adopted this treatment. This occured on the 18th March (the accident having taken place on the 16th) and Dr. Gibson did not see the patient again until about twelve weeks afterwards, —when she was apparently no longer under treatment. He found the leg crooked and shortened, from five to six inches, and the patient unable to use it. Soon after this a consultation took place between Drs. Gibson and Chamberlin, and they considered that nothing further could be done to obviate the shortening of the limb—which has since remained of the diminished length of five inches, the fracture being firmly united with the

ends of the bone overlapping each other, and the limb unable to support her weight, so that she is and must probably for the remainder of her days be a cripple.

It is unnecessary of course to recapitulate all the evidence that has been given; but after a most careful analysis of it, it appears that the following facts are indisputably established:

1st. That at the time of the accident the patient's age was about 63 years, and that her health at that time was feeble. That she had had disease of the kidneys and heart, and had been treated for both.

*Vide* Mrs. Clark's, Dr. Chamberlin's, Mrs. McGarry's, Mrs. Gilbert's, Mrs. Wilson's, Mrs. Perkin's, and Rowell's evidence.

2ndly. That a short time after the accident and while she was suffering from it and under treatment by the Defendant she had an attack of cholera morbus.

This appears by the evidence of Mrs. McGarry, Mrs. Gilbert, Mrs. Wilson, and Dr. Cotton. And it is stated by one of his witnesses that the Plaintiff himself during the absence of the Doctor, took upon himself to loosen the bandages around the broken limb.

3rdly. That during the treatment of the patient no complaint was ever made by her, her husband or any of her family of the treatment she was receiving; but, on the contrary, according to the positive statements of Dr. Cotton, Mrs. Holman, and Mrs. Connor, both the Plaintiff and his wife acknowledged in the most explicit manner that the case had turned out much better than they ever expected it would; that they were perfectly satisfied with the Defendant's treatment and it certainly appears that if any injury had arisen to the limb, from the mitigated treatment having been adopted instead of the severe course that would have been followed in the case of a stronger patient, such mitigation of treatment was acceded to by the Defendant only in consequence of the heart-rending appeals of the patient herself, "for God's sake to save her life, and not mind her limb." That the case was one of great danger and delicacy there can be from the evidence no doubt whatever, and indeed an accident of this extreme severity, occuring to an elderly female of enfeebled constitution, might naturally, according to the evidence of Dr. Valiquet, and Dr. Cotton in his second deposition, have been expected to terminate fatally. It has terminated, however, if I have rightly appreciated the evidence, not only without loss of life, but even without amputation, though indeed with most seriously impaired usefulness of the limb.

It appears further that a shortening of the limb to a greater or less extent, is an unavoidable consequence in such cases of fracture as this.

According to the Law, then, so clearly laid down by the authorities

cited, we are not now to try whether this woman might have been cured, for clearly no action will be against a Surgeon for omission or failure to cure *per se.*

We are not either to try whether there was on the part of the Defendant an error in judgment in the treatment of the case, for nothing can be more positive than the rule expressed, not for the first time it is true, but in so lucid and forcible a manner by Lord Chief Justice Tindall in the case of Lanphier *vs.* Phipos, 8 c. & p. 475.

"To charge a Surgeon with damages it is *never enough* to show *that "he has not treated his patient in that mode*, nor used those *measures "which in the opinion* of others, even medical men, the case required," because such evidence tends to prove errors of judgment for which the Defendant is not responsible, as he is for the want of ordinary care and skill, alone it cannot be evidence of the latter, and therefore the party must go further and prove by other evidence that the Defendant assumed the character of, and undertook to act as a physician without the education, knowledge and skill which entitled him to act in that capacity, that is, he must show that he *had not* reasonable and ordinary skill, or that having it, neglected to apply it.

This court has to determine whether, according to the evidence adduced, the Defendant treated his patient without ordinary care and skill; and this question must of course involve a consideration of all the circumstances, including as well the general state of health and constitution of the patient, as the peculiar symptoms that supervened after the accident. I am of opinion, after a mature consideration of every part of the evidence, that there is nothing to establish the want of ordinary care and skill imputed by the action to the Defendant. It is proved that he was assiduous in his attendance, one of the witnesses, a member of the family, deposing to his having been there every day. It is indisputable also under the testimony adduced that previons and complicated ailments had impaired the strength of the patient; that during treatment for the fracture of her thigh, she further underwent the enfeebling effect of what appears to have been a severe attack of cholera, and it is proved also in the clearest manner, that she not only implored the doctor to mitigate the necessarily severe treatment of such a case, and save her life at the expense of a more perfect cure of leg, but that she and her husband also have distinctly approved and praised the care and treatment bestowed by the Defendant. I do not here examine elaborately the question whether under all or any conceivable circumstances, a Surgeon is justified in listening and acceding to the wishes of his patient—it is sufficient for the present case to observe that there is no

evidence of the want of ordinary and reasonable care and skill such as the circumstances would permit; and though those circumstances do not seem to me to require a resort to the defence that the treatment adopted was at the request of the patient, I cannot shut my eyes to the fact, that such a request, and made in the most earnest manner is clearly proved; and I do not see in such a case how the operation of the maxim *valenti non fit injuria* is to be avoided. In case of doubt —I would for the sake of the public—take the most lenient view of the conduct of professional men in all such cases as these, otherwise we should be exposed very naturally, in cases of such severe accident, to the refusal of Surgeons to take the responsibility of attending.

The judgment of the Court is as follows:

Considering that the Plaintiff has failed to establish by sufficient evidence that in the Surgical treatment by the Defendant of the fracture of the right thigh bone of Martha Gleason, the Plaintiff's wife, there was absence of ordinary and reasonable care and skill, and further that it is established in evidence, that such treatment was, and by the Plaintiff and his said wife hath been acknowledged to be careful, skilful and, under the circumstances successful beyond their hopes, and that any shortening of the limb beyond what is usual in such cases must, according to the evidence of record be attributed to a treatment rendered necessary by the condition of health of the Plaintiff's wife, and adopted at her own request, doth dismiss the said Plaintiff's action with costs distraits to Messrs. Cornell & Racicot, Attornies for Defendant.

Messrs. O'Halloran and Baker, Attornies for Plaintiff; Hon. Christopher Dunkin, Q. C., Counsel for Plaintiff. Messrs. Cornell & Racicot, Attornies for Defendant; G. C. V. Buchanan, Esq., Counsel for the Defendant.

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## DEATH OF DR. M. H. COLLIS OF DUBLIN.

It is with deep regret we this month chronicle the sad and sudden death of the gentleman whose name heads this notice. On Monday, the 22nd of March last, Dr. Collis removed, at the Meath Hospital, an upper jaw for a cancerous tumor, and in doing so punctured his finger. Nothing more was thought of the occurence till Wednesday morning when he was seized with a severe rigor. Other symptoms of blood poisoning soon followed, and eventually secondary pneumonia supervened from which he died at an early hour on Sunday morning. Dr. Collis was pre-eminently one of the rising men in Dublin, and his sudden death leaves a blank, not easily filled. He had made numerous contributions to the medical

literature of the day, several able articles on operative surgery from his pen having appeared during the last year in the Dublin Quarterly. His most valuable work is the volume, which he issued some four years ago, "On the Diagnosis and Treatment of Cancer and Tumors Analagous thereto."

To strangers visiting the Meath Hospital, Dublin, his kindness and attention was marked, and more than one on this side the Atlantic will hold his memory in fond remembrance. He sacrificed his life in his efforts to save that of another. No nobler proof could be given of the sublime character of our profession. He was only forty-five years of age

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## THE BELMONT INEBRIATE RETREAT AND PRIVATE LUNATIC ASYLUM.

On our advertising sheet will be found the advertisement of the above institution, and we have much pleasure in drawing the attention of the profession to it. It is situated in the vicinity of Quebec, is the only one of the kind in the Dominion, and its existence, supplies a want which has been constantly felt, and which necessitated the sending the better class of insane patients to institutions in the United States. The proprietor of the Belmont Retreat has had extensive experience in the management of insane subjects, having been manager of the extensive Asylum at Beauport, and the resident physician has devoted much of his time to the study of insanity in its various phases; so that every guarantee is given that not only will the patients be well cared for, but the most judicious means used to promote their recovery.

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## THE MORTALITY OF MONTREAL.

Facts are stubborn things, and Statistics as a rule, do not lie. When we think of the large mortality of Montreal, we sometimes wish that they did, and that it was not true that we yearly sacrificed so many hundreds on the altar of stupidity and lukewarmness. Montreal is not by nature an unhealthy city; on the contrary it has many natural advantages which in a sanitary point of view, might be used most profitably. But we neglect these, as a rule we neglect everything that tends to increase the salubriety of our city, and the result is that we have the mortification of knowing that we live in not only the most unhealthy city on this continent, but almost the most unhealthy city in the civilized world. Our death rate according to an able report recently printed by the Sanitary Association is 25 per thousand, while according to the same report in

the six parishes adjoining Montreal it is only 1. 47 per thousand. As the returns in the latter case are probably somewhat incomplete it will be safe to allow a margin and put the mortality at 2 per thousand. which contrasted with that of the city causes the latter to stand out in all its awful proportions. Looking still more closely at this report we find that only 27 per cent of the interments of last year were of adults, and in this calculation children from 12 years of age are included. This brings us face to face with the startling fact that 73 per cent, or nearly three fourths of our mortality of were young children. This is a sad, sad story, and it seems to us that those who after reading it can remain calmly. and not exert every energy in favor of sanitary reform, must be destitute of every human feeling. Our Health Committee, at least some of them, have a correct conception of their duties, and if the Council could only be got unanimously to see the great importance of this Committee, and vote them a sum comensurate with its importance, some at all events of the causes of our excessive mortality might be removed. It is important to us as a city, that this state of things should not continue and we raise our voice in support of the very admirable report of the Sanitary Association.

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## SIR DUNCAN GIBB.

We are sure the numerous friends of this well known Canadian Graduate will learn with pleasure that he delivered the ninety-sixth Anniversary Oration of the Medical Society of London, at its opening meeting in the first week in April. We congratulate our friend upon the distinguished position he has attained among the medical celebrities of London.

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The *Lancet* says a most extraordinary case of mutilation is now in the wards of Guy's Hospital in the person of a young man, whose wife, it is said, grasping his genitals with one hand, with the other made a cut from above the symphysis pubis downwards into the perineum, sweeping close to the anus, and upwards again to the point at which it commenced.

By traction " the whole skin thus included was removed, together with one of the testicles, the skin of the penis stripping off like the finger of a glove, and being cut through near the prepuce. The penis, except that it is entirely divested of skin, is undamaged, and so is the testicle which remains. An attempt which was made to gouge out the man's eyes was successful, it is feared, in destroying the sight of the right eye; but the left is probably not much injured. So far as the man's general condi

tion is concerned, it is hoped, and we believe expected, that he will recover; but it is impossible to foretell what will be the state of the genital organs when they have been submitted to the processes of granulation and cicatrisation."

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Mr. Hutchison performed lithotomy at the London Hospital recently in a case which is possibly unique. The patient, a labouring man, stated that whilst drunk he had lost a No. 10 flexible catheter, and that he believed that he had passed it into his bladder. His story seemed almost incredible, but the operation proved it to be quite correct. The catheter, a No. 10 with a large mount at the end, was removed whole. The exact manner of its introduction is not known, but possibly the man had employed the stylet to push it down.

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THE INTERNAL USE OF CARBOLIC ACID IN SKIN DISEASE.—At the Vienna Medical Society, Dr. Kohn gave an account of the internal employment of carbolic acid by Professor Hebra. The most remarkable effects were produced, hyperæmia disappearing, and the irritation being relieved. Trials have as yet only been made in psoriasis, prurigo, pityriasis, and pruritus cutaneus. It is best administered in the form of pills, increased from six grains to twenty grains per diem. The solution is repulsive to most patients.—*Wiener Med. Woch.*

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## MODERN HOMŒOPATHY.

It is only rarely that we have room for reports from homœopathic practitioners. But we do give place with pleasure to the following extract from the proceedings of the Cleveland Homœopathic Medical Society recently held in that city.

"Dr. S. R. Beckwith asked if the members had any experience to report on the use of bromide of potassium in epilepsy; said it was a pretty sure remedy, given in sensible doses. He related several cases favourably affected by its use.

Dr. P. Wilson reported that late clinical reports had shown that in bad cases of epilepsy it was safe to give as high as sixty grains of bromide of potassium three times daily, that such doses caused temporary insanity which might be continued many weeks, and yet disappear on ceasing to use the medicine."

The report was accepted.

This is modern homœopathy. The reports of the London Homœo-

pathic hospitals show a partiality for similar "massive" doses, and on the continent the follies of Hahnemann are discontented similarly in practice.

We rejoice that homœopathists see the propriety of this; we are only sorry that they do not more openly acknowledge the truth about it. As to the "Law of the Similars," who pretends that bromide of potassium will produce epilepsy?—*Philadelphia Med. and Surg. Reporter.*

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Mr. Erasmus Wilson has munificently presented to the London College of Surgeons the sum of £5,000 to endow a Professorship of Dermatology—the branch of our Art to which he has devoted his life and which he has done more than any one living to advance. The professorship is not to be confined to Fellows of the College thus benefited, but with true liberality is to be conferred on the best man whatever his legal qualifications.

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## MEDICAL NEWS.

Reading, Penn, has a Physician who visits his patients on a Velocipede. —Robley Dunglison Emeritus, professor of the Institutes of Medicine in the Jefferson Medical College, Philadelphia, died on the 1st of April, in his 72nd year. He was born at Keswick, Cumberland, England, in 1798, and graduated in London in 1819.—There is a Doctor for every one thousand inhabitants in Paris.

Sir Joseph Oliffe, physician to the English Embassy at Paris is dead, His career was a romantic one. He went to Paris quite young, and was obliged to run messages to earn his living. Subsequently he studied medicine and graduated in 1840. Soon after, a beautiful English woman, daughter of the millionaire, Alderman Cubitt, promenading in the boulevard, slipped and dislocated her ancle. Dr. Oliffe was passing and attended to the sufferer. Soon after the young lady declared to her father her affection for the young physician. After a prolonged resistance from the parents, the young lady carried her point and married Dr. Oliffe. Patients soon flocked to him, his fortune was made. Shortly after he was appointed physician to the embassy, and received the honor of knighthood. Such is life.

A child died recently in St. Louis, Mo., from an over dose of hive syrup. An ounce was given from which the child died in four hours. —Chocolate drops are recommended to be taken after quinine in solution. They completely remove the bitter taste.

The Philadelphia *Medical and Surgical Reporter* says it is rumored that Dr. Brown Sequard has acceptod a chair in the Paris Faculty of Medicine. This celebrated physician, it adds, seems to have the faculty of accepting professorships, retaining them for a year or so, and then abandoning them.—The same paper states that the students of the Women's Medical College in Philadelphia, having been informed that the clinical lectures of the Philadelphia Hospital were free to all students, went in, in a body, and took their seats. The male students were uproarious, clapping hands and stamping feet, but the females were as dignified as possible. Professor Stillé, who was the lecturer, in a neat speech, bade them welcome, and then began his lecture: *Ladies and Gentlemen*· They were subsequently invited by Dr. Lewis to visit the wards. [We are totally opposed to females becoming general practitioners, and wish we could see the same opinion a little more firmly held by many of our American friends. The question has now assumed such proportions there that it must be squarely met, and we trust that the forthcoming meeting of the American Medical Association, which takes place at New Orleans in May, will see the matter decided. Woman has her peculiar sphere of usefulness and was never by nature intented to dabble in the mysteries of general medicine. The physicians of the Philadelphla Hospital may have been peculiarly placed, or Dr. Stillé may be a warm advocate for female physicians. Whichever may be correct we regret the action taken. Eds. Canada Medical Journal.—]Dr. Ripply, physician for the poor in the first district of Washington, was recently sent for to see a Mrs. Martin. He prescribed thirty grains of Dovers powders, and ten grains of sulphate of morphia, and liquorice powder sufficient to make ten pills; one every two hours. She went to sleep after the first, was awakened by her husband and given the second, and as might be expected she never awoke again, but died the following morning early. Washington has certainly queer doctors to attend to its poor.—It has been decided that the new Edinbourgh Royal Infirmary, shall be built upon the site of the George Watson Hospital—Mr. Maunder surgeon to the London Hospital records in the Lancet, seven cases of primary excision of the elbow joint, for severe injury, five of them recovered and two died, one from pyemia, and the other from a fracture of the skull, with which the case was complicated. Mr. Maunder states in tolerably healthy subjects he would remove large sections of the humerus and the bones of the forearm, rather than subject the patient to the ordeal of an amputation.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Valedictory address to the graduates in Medicine,* delivered on 4th May, 1869, by R. P. Howard. M.D., L.R.C.S.E., etc., Professor Theory and Practice of Medicine, University of McGill College.

Gentlemen Graduates.—It is again my turn to address to you a few parting thoughts in the name of the Faculty, upon whose teachings you have been attentive listeners for so long a period. You have this day received the testimony of your teachers to your qualification for the high degree you have been patiently working for, for the last four years; and the University, by the hands of its Principle, has conferred upon you severally the title Doctor of Medicine and Master of Surgery. Knowing as I do the difference between such a title, obtained after a complete course of instruction in conformity with the requirements of this University and a careful examination by its officers, and one granted by custom or assumed on possession of a simple license to practice, conferred by a Licensing Board, I heartly congratulate you upon the attainment of this the object of your ambition. You will often look back with pleasure upon the time you have spent as students, not alone on account of the pleasing associations the retrospect will recall, but also because it will remind you of much hard work, honestly done, and many opportunities faithfully improved.

This day gentlemen, you have attained your majority, and have slipped the leading strings, by which you have hitherto been held, and are about to direct your own course without further supervision. To-day your Alma Mater, sends you forthwith her seal affixed to your commission, to pursue the responsible and difficult work of caring for the life and health of your fellowmen. How sacred a thing is human life! Who shall dare trifle with it? I know not a better stimulus to industry in the acquisition of medical knowledge and skill, and a more likely quality to secure professional success than a realization of the sacredness

of human life. I have always felt that when persons ignorant of the structure and functions of the body, of the nature and symptoms of disease, and of the appropriate use of remedies, venture to prescribe for the sick, they incur not a grave responsibility simply, but commit an inexcusable crime against the life of the individual. If owing to such ignorant interference, the employment of a competent person be prevented, or a directly noxious thing be administered, and death results, what then? May not such a crime be properly designated culpable homicide?

As physicians then, who shall have to answer before an Omniscient tribunal for the lives entrusted to you, spare no pains to ascertain the nature of the ailments you may be called to treat, and to acquaint yourselves with the most approved means of combating and alleviating them.

For the first few years of your career, most if not all of you, will have much time not occupied with practice. Those years should be highly prized as affording the opportunity of enlarging your knowledge; and your future status in the profession, will depend very largely upon the manner in which you spend those early years—years of struggling and poverty they may be, of self culture, persevering study, and hopeful expectation they ought to be. Having then no more examinations before you, and having laid a good foundation of elementary knowledge, you should in future devote much of your time to the study of the great Masters of the past and present. Amongst treatises upon the general doctrines of morbid action, I know of none which will so much enrich your minds as John Hunter's works, Paget's "Surgical" and Virchow's "Cellular Pathology," and Williams' "Principles of Medicine." Would you study faithful records of disease as it presents itself at the bed side, learn its multiform phases, its perplexing combinations, its exceptional as well as its ordinary characters; would you learn how to modify your treatment according to the type of the disease, the habits, constitution and surroundings of the patient, pore over the graphic "lectures" of Graves, Todd, Trousseau, Brodie, Latham, Nelaton, Hilton, and peruse the suggestive cases related by Cruveilhier in his "Anatomie Pathologique" and by Bright in his "Reports of Medical cases." Then there are works upon diseases of particular organs and upon special departments of medicine, which you will do well to study during those early years of comparative leisure. Such are Brown-Sequard's, and Hanfield Jones' writings upon the nervous system; Stokes and Walshe on the heart; Fuller and Walshe on the lungs; Frerichs and Murchison, on the liver; Dickinson, Roberts and Thompson, on the renal organsand appendages; Barthez et Rillie; West and Hillier, on the diseases of children; Simpson and Graily Hewitt, upon the diseases of women; Wecker or Bader or Soelberg Wells, upon the eye; and Parkes, upon Hygiene.

During those early years too, acquire expertness in the use of the microscope in the examination of morbid textures and liquids, of test olutions and burettes in the volumetric analysis of the renal secretion, and of the ophthalmoscope in the exploration of the deeper parts of the e. Let me advise you to keep accurate and complete notes of the cases that come under your care, and spare no pains to record every fact connected with them. This will tend to make you accurate observers and prevent that slovenliness in the examination of patients that lies at the bottom of errors in diagnosis, and that looseness of statement that spoils the records of so many would-be contributors to science. I am confident that were any of you to expend the time and labor necessary to ascertain the daily range of temperature, the daily excretion of the kidneys, the daily condition of the pulse-wave by the sphygmograph, in four or five examples of any disease, however common, you would not only acquire a reputation for scientific research, but would soon add many valuable facts to medical science; and I suggest this method of spending a portion of your time, that shall prove alike profitable and honourable. There are some topics which we Canadians have especial opportunities of investigating and at which you may therefore hopefully work. Such are the post-mortem appearances and modes of death from exposure to cold and to heat; the condition of the blood in ague; the nature of the alterations of the spleen and liver in that affection; and the following amongst other questions: Does the paludal poison cause amyloid degeneration, or protect against consumption? Is intermittent fever due to the entrance into the system of a microscopic fungus? What is the effect of the long cold winters in Lower Canada, upon the course, duration, and issue of consumption? What are the causes and most successful treatment of charbon? What is the influence of cold and dry weather upon the prevalence, course, and issue of diseases generally?

It is time that Canadian physicians should turn their attention to their own country, and study and investigate the peculiarities which our climate, soil, modes of life and social habits impress upon the course, and termination of disease. There is a subject not remotely allied to that just spoken of, in which, because of its great importance to the future welfare and progress of the whole country, I wish to interest you; I allude to the necessity that exists for an exact and uniform system of enregistering, births, marriages and deaths throughout the Dominion, placed under the supervision of a central authority—a Registrar-General. Some of you will doubtless one day occupy seats in the Legislature of your country, all of you will have more or less influence upon both electors and members, and I hope you will take every opportunity of forcing the importance of

the subject upon the attention of both *rulers* and ruled. But while thus enlarging your scientific and general knowledge, you should bear in mind that you have other duties than the mere acquisition of knowledge,—other faculties of our nature besides the intellectual require cultivation and development. Physicians should be men of large sympathies; you are men as well as physicians. Hence, every thing that concerns man's welfare should interest you, and engage a fair share of your attention—your moral, and as far as possible, material support must be given to all enterprises calculated to improve the social, material and moral progress of your fellowmen

Take an active part then in all well-advised schemes for the instruction and elevation of the lower classes; lend the aid of your professional knowledge to the dissemination amongst all classes, of correct notions respecting the influence upon the health of dissipation in all forms, of sensational literature, of fast living, of motiveless, unemployed lives, of late going to bed and late rising, and of over application to business. Co-operate with others in the establishing of club-houses and reading-rooms for the working classes, of asylumns for the cure of the habitual and hereditary drunkard, of magdalens for the recovery of fallen women, of reformatories for the correction and reformation of youthful criminals, of houses of refuge for the destitute and improvident.—Young men when about beginning the practice of medicine, naturally seek for hints as to how they shall attain professional success; I do not know that I can tell you how, but will offer some suggestions for your consideration.

First, do not rely upon letters of introduction, nor upon the influence of friends, nor upon the favour of family connections. These are all extrinsic aids, chiefly of use as sources of hope during the period of probation, in which your own intrinsic merits shall establish your reputation as competent and judicious practitioners. You must rely upon yourselves, not in a boastful, but in a manly honest way, and you will find that although the road to success may be long and lonely, and strewn with obstructions, yet its end may be reached by patient determined exertion.

When in charge of a patient, spare no pains to ascertain the real nature of the illness, and if it be obscure and serious, or one in the management of which you feel you would like assistance or counsel, do not hesitate to inform the friends; they will generally approve of your conscientiousness. Cultivate kindliness of heart and sympathy with suffering; these will not only make you better men and attentive physicians, but will win the regard of those who employ you, and make you favorites. Be careful in your intercourse with the sick, to be truthful, simple and free from finesse or deceit; and in stating your well weighed opinion, do not endeavour to

surround it with loopholes of escape; such conduct will destroy confidence in you, and is unworthy of honorable men.

Yet avoid haste in forming a diagnosis and prognosis; nature does not reveal her secrets to the hasty superficial observer; nor can any degree of knowledge enable one infallibly to foretell her intentions.

It will frequently be necessary in the interest of your patients to exercise a prudent reticence, when you suspect or recognise a grave or fatal malady. To tell a man who is nervous about his health, that he has an incurable affection, may be to quicken into activity a passive, stationary disease; and to take away hope by too frank an answer to an unwise and unthinking patient, may be to deprive one's self of a powerful adjuvant in the management of the case, and the patient of a solace to his suffering—and may be, to say the least, a great unkindness, if not a great cruelty. Endeavour to realize at the outset, that more than most other vocations, that of the physician involves the daily practice of self abnegation. When tired and wearied by the labors of the day, you will be frequently called out at night, to watch by the bedside of one, who perhaps by his own long self indulgence, has induced the horrors of delirium, or permitted her emotions so to overrule her will as to induce a paroxysm of hysteria. Or it may be your lot to be condemned by the prejudices of a jury, and the ignorance or malice of rivals, to pay damages to an ungrateful patient whose life you may have saved by removing his limb; and that too perhaps, without having had any expectation of remuneration for your anxious services.

In the discharge of your professional duties, you must necessarily become possessed of information respecting the characters, circumstances and history of your patients which, however flattering to them, they may not care to have spoken of to others. Indeed as the family physician, you will be often likewise regarded as the family friend and counsellor, and be perhaps consulted on matters of the greatest delicacy or importance. See to it, that all such information remains confined to your own bosom, and that the confidence imposed in you, be not destroyed either by interested advice or babbling gossip.

Cherish a high respect for the noble profession you have this day entered. It numbers in its ranks many of the foremost investigators of science—its professional curriculum covers a wider range than that of almost any other profession—its members are generally characterised by liberality of opinion, comprehensiveness of observation, sobriety of judgment and unostentatious devotion to their continuous labours—and the value and sacredness of its object, can be estimated only by the value of human life, the sacredness of human suffering. Endeavour to prove yourselves worthy members

of this profession—honourable associates in its distinguished brotherhood; endeavour as far as you are able to exalt its reputation and maintain its usefulness, so that in your hand Mr. Carlyle's enconium may be applicable, "Blessed art of healing, once again divine"—

Cherishing this respect for the medical art, you will also respect all its honorable members; you will not resort to any mean or unworthy methods to build up a reputation at the expense of a rival; you will refuse to criticise the practise of a colleague behind his back, should his patients consult you. While honestly stating and defending your own views, you must respect the opinions of the brother who may differ from you, remembering that very frequently sufficient obscurity surrounds a subject to allow of differences of opinion between well informed men. Your honorable rivalry must not be debased by charlatanism or chicanery.

There are two or three evils now threatening the dignity and morality of the profession against which I would warn you. That of acting as a canvasser—*touter* is an expressive if barborous word—for Life Assurance societies. The relation of the medical officer to a Life Assurance Co., is that purely of a scientific witness, and he should not debase his profession by becoming the special pleader for a particular company, more especially since it apparently is not thought disreputable by the managers of too many of these institutions to misrepresent their actual position to the public.

Beware of becoming the paid advocate in Courts of Law, and distorting scientific evidence in favour of the side with which you have allied yourself. Self-interest is a very disturbing medium, through which to examine difficult or nice questions.

Do not attempt to destroy the reputation of a colleague under cover of a third party. Within the past year, four suits for mal practice have been instituted in the Dominion, and as far as I can judge, the sole foundation for them has been the ignorance or malice of rivals; such conduct is unjust, mean and despicable.

But finally do not practice medicine merely or chiefly for the sake of making money, but for its own sake. It is full of the most interesting analogies, facts and principles. There is scarcely any fact in physical science that does not in some way bear upon it; it sheds light upon many important problems in Government, education, jurisprudence and social economy; it takes cognizance of the wonderful processes observed in all organised beings—development, nutrition, growth, decay and reproduction; it establishes the harmony existing between the moral teachings of the bible and the operations of natural law; it cultivates the better feelings of our nature, enlarges our human sympathies, nurtures self denial,

Practice medicine with the hope, and for the sake of contributing something, however small, to the stock of knowledge left by your predecessors; practice it for the sake of being useful and doing something for your country and countrymen, and of emulating soldiers and patriots, who labour for their country's good.

Practice it from a sense of *duty*. "Happy indeed is that man whose mind, whose moral action and whose spiritual being, are all harmoniously engaged in the business of his life, with whom the same *act* has become his own happiness, a dispensation of mercy to his fellow creatures and a worship of God."

"God guide ye, God guard ye on your way
"Young pilgrim warriors, who set forth this day."

FAREWELL.

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*Case of Chronic Synovitis of Knee Joint—Resection of Joint—Recovery.* By GEO. E. S. KEATOR, M.D., Surgeon to the General Public Hospital, St. John, New Brunswick, &c., &c.

The patient, æt. 12 years, was admitted into the Hospital Department of the Alms House of the City and County of St. John, on 6th March, 1863, and states that about five years ago he fell from a beam in a new building, striking violently on his right foot. The force of the blow was so great that he was unable to rise, and was obliged to be carried home. He remained in bed a week, during which time he experienced a good deal of pain in the knee of the injured leg, for the relief of which blisters were applied. At the end of this time, he says, he began to get better, and remained perfectly well for nearly a year, when without any apparent cause that he can remember, the knee again commenced to pain him, and also to swell. It was blistered a second time, and he was confined to his bed, most of the time, for about seven months when all the swelling and pain had left the knee, and he felt quite well. As soon as he began to use the limb, however, the swelling returned, but without much pain, and at the end of three months, he could walk without a stick, but could not rest any weight on the heel of the affected limb, and was consequently obliged to walk on the toes and ball of the right foot. The leg continued much in the same state, except that the swelling kept gradually increasing, accompanied with pain at intervals, (especially when he exercised it more than usual) for more than three years, a good part of which time he passed in the country. About a week before his admission, a sudden access of inflammation took place in the joint, accompanied with all the usual symptoms, and for which he can assign no particular reason. This necessitated his remaining in bed, and in a few days, and

ten only previous to admission, an opening formed on the outer side, of the joint, just above the patella, and in this state I first saw him.

Upon examination the joint was found to be very much swollen, and inflamed, and excessively tender to the touch, so much so, that I was obliged to place him under the influence of ether, before I could satisfactorily ascertain the amount of disease. After doing so, and passing in a probe, I found that the instrument readily passed into the joint, through the external opening, and came in contact with roughened bone. There was at this time a very considerable discharge of tolerably healthy looking pus from the opening. His general condition was far from good, he had a good deal of hectic, pulse wiry, irritable and between 90 and 100, with frequent night sweats. He also rested very badly at night and his appetite was very poor.

*Treatment.*—He was ordered complete rest, the limb to be placed in a guttered tin splint, with a poultice applied to the joint. Also ordered beaf tea, quinine and iron, porter, and an anodyne at bedtime.

March, 24.—Patient has been steadily inproving under the above, he has very little pain in the joint, except when it is disturbed, sleeps well, has a very good appetite, and will allow the probe to be used without the use of ether. To-day, after a consultation had been held it was decided to resect the joint, with the hopes of giving him a useful limb. He was accordingly placed under the full influence of ether, and an incision of a semi-lunar form was made from a point opposite the middle of the internal condyle of the femur, carried below the patella, to a corresponding point on the opposite side. The flap was then dissected up and the joint opened, when it was found that the right condyle of the femur, and also the corresponding one of the tibia, were entirely denuded of cartilage and synovial membrane, as was also the entire articulating surface of the patella. The crucial ligaments of the joint were also completely destroyed. The tissues around the joint were than carefully dissected up, and the whole of the diseased bone of both femur, and tibia, as well as the entire patella, was removed, the section of the bones, being carried at right angles to their long axis, so as to bring the leg as near straight as possible. Only one small artery in the upper flap required any attention, after which the bones were placed in apposition, and the edges of the wound brought together accurately by means of silver wire sutures and adhesive straps, leaving a small opening at either side for the escape of any matter that might accumulate. The limb was then placed in a guttered tin splint, nicely padded and made to fit the leg, having two doors, one on either side of the joint, to let down so that it could be inspected, and dressings applied without disturbing the limb. He was

placed in bed, cold water dressing applied and ordered an anodyne at bedtime.

March, 25.—Patient passed a very comfortable night and the wound looks very well. Ordered beef tea, oatmeal gruel, and anodyne at night. Continue water dressing.

March, 26.—Doing well. There is a slight discharge of healthy looking pus from the lower portions of the wound. Continue treatment.

March, 31.—Everything has gone on favorably since last note. The wound has nearly all united by first intention, except the dependent portions on either side, which are purposely kept open to allow any matter to escape. There is also a small abscess in the anterior portion of the thigh, which empties itself through the original opening, which communicated with the joint. Two of the sutures removed to-day. He is now allowed a more generous diet, with a little wine whey, and citrate of iron and quinine. Appetite improving.

April, 4.—All the sutures removed. The anterior portion of the wound is now completely healed and the discharge which is tolerably free and healthy, finds exit from the lower portions of the wound.

April 14.—Since last note patient's general condition has gone on improving. He had a slight chill and passed a rather uncomfortable night a few days ago, owing to the formation of a small abscess on the outer portion of the leg, just below the line of incision. The abscess was freely opened and a poultice applied, and he is now quite easy. To-day the limb was removed from the splint for the first time, and a considerable amount of union was found to have taken place. It was changed to a well padded wooden box, the outer side of which extended up nearly to the axilla, and the foot was secured to a footboard. Water dressing continued.

April 16.—The wooden box was not found to answer so well as the tin splint, and he has not been so comfortable since the limb was moved. It was accordingly replaced in the original splint to-day.

May 24.—Patient has gone on progressing favorably since last note nothing worthy of record having occurred. His appetite is good, sleeps well at night, tongue clean, pulse soft and about 75, and there is now very little discharge from the wound. Union has taken place so that the limb can be moved with little or no pain. He was allowed to sit up a little while to-day, the limb having been first placed in a splint, made in such a manner that, as he gets stronger, he can walk with it on. It consists of a strap of iron, about half an inch wide and one-eighth of an inch thick, extending from the buttock to the foot, where it is turned up, and a wooden foot piece fastened on. It is covered with leather both above

and below the knee, which extends around the limb, and is fastened with laces, the space around the knee itself being left open.

June 1.—His limb is now kept in this splint, instead of the tin one, and he finds it very comfortable. He has not attempted to walk as yet.

June 14.—He can now place his limb on the floor and by taking another person's arm, can move along without any pain.

June 30.—He can walk tolerably well with the aid of a stout cane, has never used crutches. There is still a little discharge from the wound, but no pieces of bone have ever come away.

July 15.—Keeps steadily improving.

August 1.—Limb gaining strength eve y day. He keeps the splint on during the day, but is now allowed to leave it off at night, as the union seems to be strong enough to permit this without any danger to the limb, and the necessary tightness required to keep the splint in its place, causes considerable œdema of the knee and the parts below it.

Sept. 20.—He can now walk without the aid of the splint, but it is not thought prudent yet to dispense with it altogether.

Oct. 15.—He broke the foot piece of the splint a few days ago, and has since been walking without it.

Nov. 25.—It is now eight months since the operation was performed, and he can walk and stand without any pain or inconvenience. The union appears to be very firm, and there is no pain on pressure any where in the region of the joint. There is occasionally a little serous oozing from the lower portion of the wound, on the inner

aspect of the thigh, and also a little from the track of the old sinus, which has not completely healed. I have frequently interrogated him, as to whether any pieces of bone have ever escaped, and he says not. The limb is about 1½ inches shorter than its fellow, measuring from the anterior superior spine of the ilium, to the internal malleolus, and the knee and thigh are still somewhat larger than their fellow of the opposite side. The woodcut on the opposite page, taken from a photograph will give a tolerably accurate view of the limb as it appears at the present time.

*Clinical Remarks.*—It is now more than six years since the operation was performed, and during this time he has earned his living at laborious employment, having never, at any time experienced any serious inconvenience from his limb. I saw him last about six months ago, and at that time he was looking very healthy, and was employed as assistant steward on board of a vessel. He said he could perform all his duties without any trouble, but I noticed that his leg was much shorter than at the time he left the Hospital, being in fact about four inches shorter than the other. He managed to walk however very well by the aid of a thick soled boot. The reason of this shortening is accounted for by the fact of the shafts of the bones not growing in the same poportion as those of the sound limb, and this, I believe, is a result that almost, if not invariably, follows operations of this kind, performed on persons, who have not attained their growth. Although certainly an objection to its performance in such cases, yet it should not deter us from operating in all, or even in many instances, as the result of this case fully proves. He is now, or was six months ago, healthy and strong, and able to earn a much better living, than he could possibly hope to do, were he condemned to wear an artificial limb, which would have been his only alternative. I have detailed this case at considerable length because I think it is both interesting and instructive to note the progress of nature after such operations, and also useful to the younger members of the profession who may be called upon to treat such cases. It is also, I believe, as far as I can ascertain, the first successful operation of the kind that has been performed in the New Dominion.

St. John, New Brunswick, April 28th, 1869.

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*Tetanus in an infant nine months old, during dentition and accompanied by the passage of the Round Worm* (ascaris lumbricoides) *with remarks on the local prevalence of this and other allied species.* By A. Leith Adams, M.B., Surgeon Major 22nd Regiment, Frederickton, New Brunswick.

A case similar to that here recorded is published in the London *Medical Times and Gazette*, March 27th, 1869, by Dr. Whitehead. Seeing

that the disease is not of common occurrence at the above period of life, and the connections between it and the parasite on the one hand, and the irritation of teething on the other, are important elements not apparently present in the case, recorded by Dr. Whitehead. I have thought the following details worthy of being placed in juxtaposition with what he has observed.

An infant enjoyed excellent health up to the 29th of March, 1869, when her mother observed a slight twitching of the muscles of the cheeks, with considerable restlessness, heat of head, and a constant tendency to carry the hands upwards towards the mouth. On the 1st of April, I was requested to visit her and found the above symptoms, besides unusually dilated pupils and a vacancy of expression in the face, which the grand, mother attributed in conjunction with the other conditions to the presence of worms; none of which, however, had been observed at any time previously. The two upper canines were on the point of appearing, the gums around were red and inflamed; there were four incisors already through, besides other lower back teeth rising rapidly. Pulse was quick and the breathing rapid. Appetite good, but stools had been dark coloured and offensive for some days. Mother very delicate with a meagre milk supply; the child was therefore ordered strong beef tea, port wine and unskimmed cow's milk; the upper gums were lanced and a powder composed of Hydrarg *c* Creta and Pulv. Rhei Comp., was given immediately; cold to the head.

April 2nd.—Purgative acted freely, stools dark and very fœtid. The twitchings of the face relax; during which intervals the pupils contract again; there is evident congestion during the spasm, as the face becomes red. April 3rd—Alternations of spasm during the last twenty-four hours and now the limbs are convulsed, but no pleurosthotonos observable; very restless, moaning and screaming almost constantly; takes nourishment readily and without any difficulty in swallowing. April 4th. A very rest less night, tossing about, constant spasms with flatulent enlargement of the abdomen to a great extent. Opisthotonos observed for the first time and fully developed; slight trismus, but swallows when food is placed on the back part of the tongue. A round worm came away before my visit in the morning; it was found to be a female of the ascaris lumbricoides and three inches and a half in length. No relief whatever followed the discharge of the worm. Stools much improved in appearance, still mucous. A small dose of Santonine in castor oil was given, and the bowels opened freely afterwards, but no worms. Constant moaning and screaming during the afternoon, with fixed jaws and perfect inability to swallow. Continued in this state throughout the following day until after-

noon, when she fell into a semi-comatose state, and gradually sank and died, at 1 a.m., on the 6th of April. The usual opiate and antispasmodic treatment was tried, warm baths &c., without any apparent good results. I regret to say that the parents would not allow an examination of the body; consequently as regards the parasite, we are left in doubt, whether or not more existed in the alimentary passages; moreover, even supposing others were present, at that period of life, it is a difficult matter to know which of the two sources of irritation gave rise to the usual symptoms so frequently ascribed to one or the other.

As far as New Brunswick is concerned, there seems to be a remarkable preponderance of round and thread worms as compared with the tape worms; indeed so plentiful and widely distributed is the ascaris lumbricoides, that few of the common people in the inland towns or settlements, have not at some time or other been infested by the worm. In the case of infants, we meet with it in such as never used any other nourishment beyond their mother's milk and well water. The popular belief is that the round worm finds it entrance into the human body, altogether by well water. At all events, the marked predominance of this species, as compared with the teniæ, as far as the locality in question is concerned, is undoubted and leads us to observe what data can be relied on by way of explaining this pecularity.

According to Kuchenmeister (*a*) the favorite districts of the ascarides in the Old World are moist coast lands and low grounds, to wit., the valley of the Nile, &c. Such conditions are prominent features in the topography of New Brunswick, and in particular as regards the city of Fredericton, where the case here recorded occurred. It is situated in the valley of the St. John, on an intervale composed of stratified, but loose river gravel, underlaid by clay (the water bearing horizon) and supplied entirely by wells, subject to constant pollution from percolation and bad drainage. There, therefore could be no more likely mode of conveying the ova of Entozoa into the human body, than through its well water especially, after the great thaws of spring. Now round worm is exceedingly common among the inhabi- tants of Fredericton. So much for the probable production of this parasite by drinking water.

It has been said, both the ascarides and oxyuri, are conveyed into the intestinal canal in bad flour and bread; also, that round worms are especially common among people who feed a good deal on raw vegetables. As to animal food eaten raw, there can be no ques-

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(*a*) Manual of Parasites. Vol. I, p. 317. Sydenham Society Edition.

tion that teniæ are produced thereby, but I think to neither of these two channels (at all events the last,) can we ascribe the marked predominance of round worms in New Brunswick. I think the probability is (supported by their presence in sucking infants) ; that well water is the chief mode by which the unwelcome and often troublesome round worms, gain admission into the alimentary organs *i. e.*, supposing the *generatio equivoca* of some French helminthologists is untenable. With reference to the symptoms, which are produced by the ascarides, whilst remaining in the intestine, it is wonderful how little trouble attends the presence of even many round worms ; there seem to be times in their existence when they remain stationary, and others when they take to wandering about. In the latter case it would appear, they give rise to their most unpleasant symptoms, and the reflex phenomena usually ascribed to their presence. The characteristic aspect of the face is common to all forms ; the snuffling of the nose and irritation there, and at the anus, generally indicate their proximity, just as they induce a tickling dry cough, particularly in children. The opinion that they give rise to convulsions during teething, is questionable, but as in the case just detailed, it is important to mark their presence in all instances of the kind.

The case described by Dr. Whitehead, although absolutely similar as regards the tetanic symptoms, did not show any indications of parasites, and occurred in a much younger child. Whether generated by the presence of ascarides or a condition which favors their existence, it will, I think, be invariably observed, that they are accompanied by large accumulation of intestinal mucous. As to treatment, one of the best vermifuges for round worms, will be found in Santonine. I have never seen any bad results from the use of the medicine, when given along with castor oil. Its effects on vision are never complained of when taken in this way, but alone, in repeated doses, the Yellow Jaundiced aspect of objects, is often an unpleasant symptom which distresses some patients very much. The use of Quassia and Iron for a few weeks, seem to make their abodes scarcely endurable, especially in children, and often diarrhœa and drastic purgatives will expel a colony, whilst on the other hand, no remedies whatever, will cause them to abandon their host.

The thread worm (Oxyurides), I have observed common in natives of India and Northern Africa, and it is frequently the most difficult to expel, the most troublesome of the three here noticed. There can be no doubt, it is nocturnal in its habits, and probably wanders from person to person in that way. The emigrations and immigrations explain why in a family of children sleeping for the most part in one bed, we find all affected by thread worms. But where the worms are plentiful and constantly

## MICRO-PHOTOGRAPHS OF TRICHINA,

### FROM HUMAN MUSCLE.

*Plate No. 2.*

1.—Free Trichina from Montreal patient, Mrs. P.; case No. 9.
2.—Encysted Trichina from same case.
3.—Free Trichina, alive, from case No. 8, Mr. P.
4.—Large Trichina, structure undeveloped, from same patient.
5.—Small Trichina from Hamilton case, fatal in three weeks.

deposited on the ground, there is every facility allowed for the transference of the mature animal, or its embryo by water, or any article of food to which it may adhere. There is no sovereign remedy for the thread worm, and after a trial of every description of anthelmentic, the patient is left to suffer. The violent itching at the anus, and snuffling at the nose, often resist every remedy to cure. Sometimes a little vegetable tonic and iron with enemata of the same, or of salt and water, (the latter before bedtime and retained for half an hour) give fair results, but as must be the experience of all who have observed the worst cases of thread worms, that stools deeply impregnated with iron, often swarm with them, which shows they can live and flourish in spite of that remedy.—The vulgar idea that apples and pears are productive of thread worms, may have arisen from observing the larvæ of other insects in these fruits.

Considering the great amount of pork used in the lumber camps and backwood settlements of this Province, one would expect tapeworm to abound, and no doubt, were the inhabitants like the English navvies and country laborers addicted to eating raw meat, such would be the case, but they are not so; moreover the pork being salted and steeped for a length of time in brine, possibly destroys the *cysticercus* of the tapeworm. Nearly all the pork used in the Province, is salted beforehand, and always well fried or roasted. The flour is either imported from Quebec or Ontario or the United States, and as with the buckwheat, oatmeal, &c., no doubt the process of cooking suffices to destroy the parasite, so that the only two ways seem to be, by uncooked articles of food, and migrations of the animal itself, as in the case of the thread worm. I believe that if a proper water supply was furnished to the city of Fredericton by good filtration, the ascaris lumbricoides would soon become rare.

New Brunswick, April 20th, 1869.

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*Remarks on Trichinæ Photographs;* Plate II. By J. Baker Edwards, Ph.D., F.C.S.

The illustrations presented in this number are, with the exception of No. 5, photographs of Trichinæ taken from the flesh of Dr. Bessey's patients, by Dr. Fenwick; to which reference was made in the last number of this journal, page 517.

In plate 1, (fig. 2 and 3,) in the last number, the worms were extracted (post mortem) from the remains of Mrs. George Getz, of Hamilton, Ont. who died after six weeks illness; fig. 5, plate II. in the present number, is taken from the muscle of her daughter, who died after three weeks illness; figures 1 and 2 are from the tibialis posticus muscle of Mrs. Popham, and figs. 3 and 4 from the gastronemius muscle of Mr. Popham

about eight weeks after the ingestion of the infected pork. These two plates therefore illustrate the first four cases known in Canada. These are taken with the same object glass, and at the same distance, and are calculated at 100 diameter. It is therefore obvious that the size of the worm in the Montreal cases is remarkably large. In figure 2, plate II. the worm has formed a perfect cyst and is therefore indistinctly seen through it. In the recent fatal cases in Chicago and Hamilton, no cysts were discovered. As, however, several are observed in these cases, it is probably that the cyst forms after about eight weeks, but that it does not become calcareous under a period of twelve months.

Figure 3. plate II. was when first extracted elongated at right angles, to its last coil, it so remained for several hours, and was then observed to move; after a few hours it was found to have contracted to its present form. It was therefore, probably, both alive and sentient. In its internal organization it shows well the medial line, which separates the ovaries from the intestinal canal and is therefore a large sized female to be -unencysted. Figure 4, plate II. from the man's leg is the largest free worm yet observed. Some authors assert that the male worm is distinct from the female, and only one third the size; others consider that they are, with the rest of their order, Hermaphrodite. Very little can be seen of the internal structure of the worm in this photograph, but under the microscope it is exceedingly clear and shows no medial line, but a very uniform structure. The question arises, is it a male worm, or is it simply undeveloped, but of unusually large size? and lastly do the sexual characters develope themselves at all in the young worms hybernating in the muscle? On these points authors are conflicting; the re-search is surrounded by difficulties, and although so much has been written and proclaimed upon the natural history of these worms, I can only arrive at the conclusion that our knowledge of them and their history is yet in its infancy, and a field is here presented for further and very extended research.

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*Cases of Trichiniasis occurring in Montreal*, by WILLIAM E. BESSEY, M.D.

In consideration of so much having been written upon the subjects of Trichina Spiralis and Trichiniasis I will confine myself in this paper to the *clinical history* of eight cases coming under my own observation in this city, in association with Dr. R. P. Howard to whom I am greatly in debted for able assistance in their management.

On the evening of March 25th 1869 I was called to visit a family of whom several were very ill; on going to the place I found upon inquiry that on the previous day all the parties then ill had eaten sparingly at dinner of hastily fried ham; that up to that time they had been in good health and about their usual avocations and since then nothing had been eaten by any of them. Upon the table were cold boiled beef, potatoes, bread and butter, tea and a hastily prepared slice of ham weighing 1¼ lbs. Eleven persons sat down; of these nine were helped to small pieces of ham and two received none; all of the nine afterwards became more or less ill, the two only escaping. This led me to request a portion of the ham for microscopic examination, which was promised by my next visit.

*Patient No.* 1.—A young married woman aged 25, had eaten a very small piece, ¼ inch thick by 2 inch superficial. Scarcely half an hour elapsed when she began to feel very ill, from nausea and desire to vomit, retching severely, but no vomiting; severe rigors soon followed, with icy coldness of extremities; retired to bed immediately, high fever next came on, with severe headache and great thirst; half an hour later, sharp cutting pains seized the bowels in umbilical region; had been drinking freely of cold water. Two hours after the meal, bowels became loose and purged excessively with severe griping pains and tenesmus: stools thin and copious and very dark in colour, desire increasing with the stools; felt a dryness of the throat, with tongue parched and feeling stiff and swollen, thirst on the increase—during the first night the pain in the head continued severe, with high fever and slight delirium; frequent draughts of cold water increased pain and looseness of bowels. Next day, 25th, felt severe pain in the back with a sense of heat radiating over the body, retching continues but no emesis.

March 25th, 10 P. M.—All symptoms previously enumerated, on the increase, skin hot and dry, tongue feeling clammy and swollen, very red at the tips and edges and covered with a dirty brown fur down centre, complains of a sense of constriction in muscles of the throat; severe, dull, sickening pain felt in cardiac extremity of stomach, pulse 146 in minute, stools occuring every ten minutes, thin and copious and dark brown; motions preceded and attended with severe tormina and tenesmus; a strange stiffness of the extremities with creeping sensation in arms and wandering pains throughout the body, severe indisposition (a general mallaise) complained of, with complete anorexia, insomnia persistent, although patient craves for sleep; other patients similarly affected, in some considerable delirium.

*Treatment.*—Ordered sinapisms over stomach and prescribed Pulv. Ipecac Co. Grs. x every four hours.

26th.—Is very ill, pains relieved by powders, and also procured a little sleep; no improvement otherwise, looseness of bowels on the increase, tormina and tenesmus very severe, a good deal of soreness and tenderness of abdomen on pressure, not tympanitic, tongue same, retching without vomiting continues; sensation in throat of a dull, aching character—patient very prostrated, pulse 120 lying, 126 sitting.

Had a sample of ham given me, bought by the same purchaser from same vendor and identified as a piece of same ham as that of which the patients had eaten; handed a portion of this to Dr. J. Baker Edwards for microscopic examination; another portion was afterwards given to Dr. R, P. Howard

After seeing all the patients this a. m., and finding them suffering from very alarming symptoms which I considered to be those of trichiniasis, I requested a consultation with Dr. Howard which took place at 4 P. M.—found patient still same, symptoms continuing unabated,—as patient had not vomited, ordered Zinci Sulph Grs. xl to be taken immediately, and a tablespoonful of the following mixture every four hours.

Spts Amon Co. ℥ i, Acid Carbolici ℥ i, Opii Tinct ℥ iiss, Syrupis ℥ i Mucilaginus ad ℥ viii.

Also recommended small quantities of beef tea every two hours.

Procured specimens of the urine from each person, which I tested for the presence of arsenic, lead, copper and antimony, but with negative results in every instance, thus leaving no room to suppose that mineral poisons had anything to do with the symptoms.

27th—Patient delirious last night, no abatement in symptoms, has taken medicine every four hours; beef tea caused distress in bowels with desire for stool, pulse 116, feeble—continued medicine every two instead of every four hours.

28th—Pulse 108—patient weak, no motions since 12 o'clock last night; less tormina, constant pain in bowels agravated by drinks, continued thirst, tongue still red at tip and edges; Pharynx dry and slightly injected, lips the same, constant pain in back, pains and soreness in knees and ankles, numbness in hands and right shoulder, no appetite, has taken a little beef tea, with medicine every two hours since yesterday. 10 P. M. pulse 102, thirst increased, bowels soft, but tender on pressure, mind wanders, has taken a cup of beef tea to day and continued medicine, says she feels 'most miserable."

29th—Pulse 90, tongue same, more tender at the tip, less thirst, bowels less pained after drinks, severe frontal headache, eyes appear heavy and are tender, no appetite, bowels not moved since yesterday, slept better during night, mind wanders a little—10 P. M. pulse 100, respiration short and

hurried, tongue slightly coated, severe pain in abdomen and limbs—one motion of bowels to day, paroxysms of throbbing pain in the head, spasms of pain in legs also.

30th—10 A. M. Considerable nausea, pains felt in the stomach for first time, radiating over abdomen, pain severe in head, back, and limbs; great thirst since yesterday, quite feverish to day, cramps and pain of bowels on pressure—pain and tenderness in calves of legs, lower third' extending down to ankles, soreness of muscles of both thighs and arms' inner hamstring muscles particularly painful and tender to the touch to day; pulse 102, becomes heavy and feverish towards evening, one motion of bowels to day—10 P. M. Not able to sit up this P. M.; pulse 86—weak and feverish, eyes dull and heavy with considerable lachrymation, right eye puffed, throat quite sore, fauces very red, voice hoarse.

31st—Pulse 90—feels better, ate a little biscuit yesterday which caused pain and uneasiness in the stomach, this organ feels sore constantly, sometimes painful; no appetite to day, tongue cleaner, but still very red at tip and edges, still thirsty, bowels twice moved in last twelve hours, stool liquid and offensive, brown colour but contain no blood; pain severe in head and bowels to day with general abdominal tenderness, considerable soreness and tenderness felt along the inner and posterior aspect of the thighs and calves of legs, lower third.

April 1st—Very ill last evening, suffered much from pain in the head and throughout body, severe tormina, general abdominal tenderness greatly increased on pressure, particularly in right illiac region; sharp gnawing pains in left leg yesterday, continued into night, less severe at this time; pulse 84—one motion of bowels during night, attended with distressing pain.

2nd—tongue clean throughout, no appetite, sickness and pain in stomach occasioned by food ingested; only slight thirst now; moved about to day a little which produced severe aching pains in legs, inner part of thighs and calves principally affected; same felt in right arm, complains of "severe pain in the top of head," unlike anything before experienced; is now taking Carbolic mixture thrice daily.

3rd—Considerable nausea, abdominal tenderness increased, bowels very loose since yesterday causing much weakness; complains very much of stiffness in limbs—Pulse 90—tongue clean, very red and sensitive at the tip; no appetite.

5th—Complains of severe headache, painful and sore condition of muscles down back of legs, especially on moving or handling—appetite returning, and food taken does not now cause pain or uneasiness in stomach—Pulse 76.

7th—pulse 93—Feeling languid and feeble to day; tongue retains its characteristic appearance, abdomen still tender; eyes very weak and moist; severe pains in head and limbs to day; no appetite, stopped carbolic mixture and ordered ℞ Quin Sulph Grs xvi, Acid Nit dil ʒ j, Tr. Gent Co. ℥ ij, Aqua ad ℥ viii, misce; to take a table spoonful thrice daily.

8th—Patient better, appetite improving, muscular pains less troublesome.

9th—Appetite still better, Pulse 98, considerable pain in head and back, also in bowels to day; eyes very weak to day, considerable Lachry mation, sight dim, conjunctiva injected, ordered ℞ Pulv Aluminis Grs? iv, Aqua Camphora ℥ ij, ft Collyrium — Bathe the eyes frequently, with this lotion.

10th—Feeling very well to day, good appetite, bowels regular but stools continue thin, of gruel consistence; tongue clean, slightly red at tip and edges, limbs sore and stiff in moving, tenderness felt along the inner aspect of right calf; is deep seated, near the bone, also along the inner side and back of left leg, and in right arm near insertion of the déltoid.

12th—Muscular pains increased, patient complains of being "sore from head to foot," severe aching pain in left knee; eyes heavy; pulse 90.

16th—Vision clearer, eyes stronger, less tender and watery, muscular pains same, heart greatly oppressed to day; is constantly sighing, pulse 96; appetite very poor, not gaining strength, but rather weaker to day.

17th—Very weak and languid; considerable thirst; muscular pains troublesome; no appetite; low spirited; pulse 102.

24th—Limbs still sore, has improved gradually since 17th; appetite better, aching pain with heat in bowels after motions; inclined to constipation, able to move about again and sew a little without fatigue.

29th—Limbs swell every day, greatly puffed in evenings; much exertion causes "a great deal of pain and stiffness with lameness," "oppression of the heart, and muscular pains" cause much inconvenience.

In this case a continued debility with soreness of the muscles, and want of tone in the digestive organs remain and are likely to continue for an indefinite time. This patient could not be prevailed upon to allow an excision of a portion of muscle to be made.

Patient No. 2.—Is husband of last patient a young man æt 25, in full health at time of the occurrence; eat of the ham at same time, but did not feel ill until following morning about 6 a.m., beginning with violent vomiting, severe throbbing pains in the head, cold chills followed by high fever, intense thirst, and excessive purging.

Received similar treatment to others; gave no emetics, vomiting having already been excessive, but purgative draughts, and carbolic mixture, thrice daily; patient made a rapid recovery, and was able to resume work on the 12th of April. In this case, severe headache and dizziness was felt throughout, with sharp griping pains in bowels, and excessive purging followed by considerable loss of strength, but with very little muscular soreness or stiffness, the knee joint sometimes painful, eyes feeling tender, conjunctiva red and watery with occasional dimness of vision; during convalescence patient seemed easily exhausted, dull and languid with disinclination for exertion.

Patient No. 3.—A lad of twelve years, had mild symptoms and recovered speedily; had eaten a very small portion, and vomited freely in an hour afterward, had slight purging with chills, headache and fever; received like treatment with others and was "all right" again in a few days.

Patient No. 4.—An old lady aged 88 years, of thin visage and wasted frame, very active up to 24th, ate a small piece of ham $1\frac{1}{2}$ in. square with others, and continued well up to $12\frac{1}{2}$ o'clock the same night, when she was seized with severe pains in the bowels, (umbilical region) immediately followed by excessive purging but no vomiting, cold chills soon came on with fever and great thirst; drank very freely of cold water which produced ineffectual attempts to vomit, continued to grow worse during next day; saw her first on the 26th in company with Dr. Howard when she was greatly prostrated; pulse 126; tongue dry and very red at tip and edges, brown fur down the centre, and feeling stiff and larger than usual, yet not perceptibly swollen; bowels moving freely every half hour, stools thin and copious, dark brown colour and offensive, frequent ineffectual desire to vomit, severe pains in stomach; abdomen flaccid and tender on pressure; ordered sinapism to stomach with desertspoonful doses of carbolic mixture every two hours, with frequent allowances of beef tea.

28th—Much worse, great thirst and high fever, very feeble, lies in a stupid drowsy state, requiring to be roused, all symptoms continuing unabated; beef tea to be given frequently and reduce carbolic mixture to teaspoonful doses thrice daily, also port wine ℥ j. every four hours; pulse 108.

30th—Still very feeble but better, pulse 96, no headache to day, looseness checked, bowels only once moved in past 12 hours, abdomen full, but no tenderness on pressure, slept well last night; continued treatment.

From this point patient continued to improve until 18th April, when she complained of tenderness of eyes with lachrymation, becoming

painful, stiff and itchy in mornings unless regularly bathed with warm water, sight impaired, is not so clear as formerly, is weak and tremulous and does not gain strength, appetite is good, amounting often to a craving for food; continue wine and beef tea and half tablespoonful doses of Quinine mixture three time a day

21st April—Patient very feeble, pulse 108, complains to day for first time of stiffness and soreness in limbs with weakness, eyes improving steadily, to which the lotio aluminis is being applied.

24th—Much weaker, has to be assisted in getting out and in bed, appetite failing, has no pain, much troubled with weakness and oppression of the heart, during past few days; head feels light and dizzy, pulse 102, bowels regular, weakness extreme, stimulants to be continued.

May 14th.—Limbs very much swollen in the evenings, left leg quite lame, is painful and edematous along down the outer surface, able to move about with *difficulty*, appetite good.

Patient No. 5.—A child of 16 months old was in good health previous to the 24th March, when it was fed with three small pieces of the ham in question. In this case no symptoms of illness were manifested until 11 a.m. of the following day, when the child became feverish, fretful and restless, very thirsty, and freely purged, stools thin, offensive and dark brown, occurring every few minutes, child crying with pain; on 28th, blood appeared in stools; 29th much worse, pulse 144; stools thin and bloody, and attended with severe pain, very feverish and thirsty; drinking barley broth. Prescribed ℞ Pulvis cretœ Opic ʒ i. divid in pulv xii. one to be given every six hours, which resulted in complete relief in two or three days; after this the child continued pretty well up to the 19th April, when I found him fretful and restless, bowels oos e, face swollen, eyelids edematous, hands puffed, and eyes red and watery, conjunctiva injected, lids adherent in mornings, child looking pale and languid and no appetite; recommended bathing eyes with warm water and lotio aluminis thrice daily, and a teaspoonful every four hours of the following prescription:

℞ Potass Acet grs. xxxii.; Spts. Eth. Nit. ʒ iii.; Liqr Amon Acet. ʒ iv. Tr Opii. Cam. ʒ iss. Aqua ad ℥ iv.: saw child again on the 21st. and found it much improved, puffing of hands and face had disappeared, eyes much better and appetite good, after this it continued to improve, taking the following prescription:

℞ Ferri et Quinæ Citras. ʒ i. Syrup Aurant ℥ i. Aqua ad ℥ iv. misce. A teaspoonful thrice daily; Is now quite well again.

Patient No. 6.—A boarder, ate about 1½ in. square of the ham in question, and shortly afterward felt very ill, with severe dull pain in

stomach and nausea; took immediately a large wineglass of brandy, and felt as well as usual until the 29th March, when he complained of feeling "sore all over" and unable to work, tongue parched, red at tip and edges and coated, thirst great, with severe pain in the back, pulse small and quick, 102 in minute: patient not being under my care I saw no more of him, but learned that the symptoms soon passed off and he quite recovered:

Party No. 7.—Had severe symptoms from outset, ate heartily of the ham in question, and about half an hour after the meal, began to feel very ill of a "severe pain across the bowels," and cold chills, went to bed and soon became very hot and feverish, and "awfully thirsty," had severe pain in head and soreness in limbs (thought he was taking rheumatism) about four hours later bowels became loose and purged excessively, with severe gripings and general mallaise, "felt as if he should die," symptoms continued same to 27th left, his bed when severe vomiting came on, excessive purging and rending pain in the head continuing; stools thin and copious, very offensive, and of a brownish colour, occurring about every ten minutes. On the evening of the 27th took an emetic of Zinci Sulphus grs. xl. of his own accord and purgative draughts of Oleum Ricini, with Acid Carbolic Sol. gtt. xx—delirium continued during nigth wild and muttering; on the 28th began use of carbolic mixture prescribed for other patients, after which the pains and looseness of the bowels were relieved, excruciating pain with dizziness continuing in the head, patient feeling very irritable and "wicked," 28th—took another emetic of his own accord, vomited freely and felt better, slept well during night, on 29th—pain in head still severe and (light in the head) wandering. 30th—better and continued to improve from this point, lacking, however, for some time his usual good appetite, and vivacity of spirits.

Patient No. 8.—Mr. P., aged 50, was in excellent health previous to the 24th March, ate of the ham in question, a piece about 3 in. square, superficially and ¼ in. thick; felt no inconvenience until on the way to the shop, about half an hour or more after, when he was seized with severe tormina of bowels, with urgent desire for stool; had motion of bowels on reaching the shop, which was thin and copious, and attended with severe pain and tenesmus: pains in bowels continued very distressing, but no vomiting, desire increased with every stool, now felt a "rolling disagreeable sensation in stomach" but no nausea; severe rigors next set in, followed quickly by high fever, intense thirst and severe racking pains in the head with giddiness, extremities "icy cold" with wandering pains through the body; bowels moving about every forty

minutes with severe pain and tenderness, motions dark brown colour, liquid, copious and offensive, increasing in frequency to ten or fifteen minutes; during evening began to perspire profusely; tongue now felt swollen and stiff, and articulation affected thereby, with dryness of throat and hoarseness, felt heart beating rapidly, symptoms continued with increasing severity during the night of the 25th with wandering and sleeplessness, symptoms increased in severity on 26th; pains in head and bowels almost insufferable and aggravated by each motion which are more frequent; has throbbing of the heart now, with oppressive sinking and pains in the back and limbs, great thirst and complete anorexia.

26th.—Countenance very anxious, eyes wild, great exhaustion; pulse 126, thinks himself sinking rapidly; bowels very loose and pained, a strange stiffness, with wandering pains felt in limbs, tongue very red at tip and edges and coated with a dirty brown fur down the centre, clumsy and stiff in articulating, mucus membrane of mouth and fauces congested, dryness of throat, urgent thirst, drinks are immediately followed by stools, soreness with dull pain felt in stomach, very restless, copious perspiration, short rapid respirations, great tenderness of abdomen in lower zone particularly, stools every ten minutes, persistent insomnia. Ordered sinapisms to stomach, and ten grains Dover's powder every four hours, awaiting further developments; 4 p.m. saw him again in consultation with Dr. Howard, symptoms continuing: ordered Emetic of Zinci Sulphas grs xl to be taken immediately, no vomiting having as yet occurred, and tablespoonful doses of carbolic mixture every four hours, with frequent allowances of beef tea.

27th.—Patient very feeble, pulse 126, bowels once moved during night, fullness of abdomen and great tenderness on pressure; still perspiring profusely, severe pain in back, and general soreness: Emetic acted freely, is having fewer motions of bowels, but greater pains, ordered ℞ Oleum Ricini ℥ j. Oleum Terebinthinæ ʒ ii. Tr Opii, m xl. Oleum Menth Pip m ii. Mucilaginus ℥ iii. to take one fourth part every six hours.

28th.—Still weaker, took draught as directed, stools very frequent and copious since, pulse 108, thirst insatiable, severe pain on pressure in lower zone of abdomen, tongue same, inside of lips very red, stools occurring every ten or fifteen minutes with severe tenesmus, spasmodic attacks of griping now frequent, all other symptoms continuing; cease all medicine and take one of the following powders, every six hours.

℞ Morph. Sulph grs. ii Pulv. Cretæ Co grs. lxiv. divid in pulv viii. At 4 p. m. excessive thirst and high fever, coldness of feet with cramps in calves of legs, which feel sore to touch, frequent and violent spasms in bowels.

9 p.m.—Vomiting freely, very restless, pulse 126, respirations quick, has taken powders every six hours, eyes filmy and glaring, prostration imminent, ordered frequent doses (℥ j.] of port wine with beef tea; cramps in legs relieved by rubbing with camphorated spirits, ordered Morphia Murias, grs. ¼ to be taken immediately to procure rest.

29th.—Is quicter this a.m., symptoms abated, less thirst and fever, slept better after morphine powder; pulse 96; tongue dry, still very red, some frontal headache, general soreness all over with shooting pains through body to day; slightest pressure on abdomen insufferable, great tenderness in gastronemius muscles, frequent action of bowels in last twenty-four hours, patient estimates 150 times, omit powders and apply turpentine stupes to abdomen, with ʒ ii. doses of Carbolic mixture every two hours; 10 p.m. is restless, with sense of oppression in region of heart, pulse 108, soreness and cramps in legs this p.m., mind wandering, otherwise the same.

30th.—Took morphine powder last night, rested better, stools less frequent, liquid and bloody; abdomen less tense, still tender, no cramps but tenderness now in legs; 10 p.m., pulse 100, worse since noon to day, stools still bloody, more thirst, tongue same, swollen and stiff today, less soreness in legs, abdomen tense and painful on pressure, frequent eructations of wind, no desire for food.

31st.—Pulse 84, less thirst, tongue furred and very red, a little appetite to day, constant soreness with dizziness in forehead, six motions of bowels since yesterday, stools thin and bloody and very painful, great tenderness in right illlac and hypogastric regions; taking Carbolic mixture three times a day.

April 3rd.—Symptoms continues same, with tenderness of eyes, and presence of Epiphora and Myopia; recommended use of lotio aluminis same as used by patient No. 1, thrice daily.

April 5th.—Symptoms continuing; pulse 88, soreness in back of legs, troublesome in attempting to walk, is very dizzy and weak, tongue feeling tender at the tip.

6th—Calves of both legs sore and stiff on moving, pulse 72, appetite good.

7th.—Dysenteric symptoms returned to day, with severe pain and cramps in bowels, abdomen still tender, pulse 86, constant lassitude and depression, complete anorexia, legs stiff and weak to day with want of proper use; taking Carbolic mixture ter. die. until to day; stopped it and perscribed, ℞ Quin Sulph. grs. xvi. Acid nitric dil. ʒ j. Tr Gent Co ℥ ij. Aqua ad ℥ viii., misce, a tablespoonful thrice daily.

11th.—Hyperasthesia of skin complained of, stiffness and soreness of abdominal muscles and legs continues, no appetite, bowels regular.

12th.—Tried to work to day, but was unable to endure the fatigue; soreness of limbs with gnawing pains in knee joints and unsteadiness of gait, unable to straighten himself up because of soreness in abdominal muscles; gaining appetite but no strength.

14th.—Improved, bowels regular, increased stiffness and soreness in muscles and joints, eyes weak and sight dim.

15th.—Weak and prostrated, pulse 102, pain and tenderness of limbs to touch, has constant aching pains and great soreness about the junction of gastronemius with tendo achilles.

18th.—Limping about to day from soreness in calves of legs, very weak also; a little exertion followed immediately by great prostration, muscular pain in right arm about insertion of deltoid muscle, these pains are of a "tearing character," inmoving; appetite good, bowels very irregular, one day loose and next quite costive, and much pain with motions.

19th.—Patient feverish and exhausted, some gurgling and pain in bowels to day, moved once to day, a few rose spots on abdomen, gurgling and tenderness on pressure in right illiac region, pain in head and limbs, eyes tender, still no appetite.

21.—Still very feeble; pulse 90, limbs tremulous, lameness of leg passing away, soreness remains, bowels confined; to take Oleum Ricini ℥ j. rose spots disappeared, no gurgling, bowels irregular, either very loose or very costive, smallest quantity of food taken causes pain in stomach. 24th.—Symptoms same, bowels constipated continually now. lameness gone, muscular pains still troublesome.

May 14th.—In company with Drs. Howard, Sewell, Ross, and Fenwick, excised a portion of left gastronemius muscle in patient which was afterward submitted to a careful microscopic examination by Drs. Girdwood, Edwards, Howard, Fenwick and others and found to contain living Trichinæ in large numbers, and in an advanced stage of development.

This patient has made several attempts to resume his daily occupation but has as many times only proved his utter inability to endure the fatigue consequent upon continued muscular exertion, and at date of publication is laid up with small abscesses in the gastronemius muscle resembling furunculus.

Last Case No. 9.—Is wife of previous patient, aged 46; was in good health previous to the 24th, also ate a small part of the infested ham; began to feel ill about 3 a.m. on the following morning (15 hours after) first had cold chills, rigors beginning in feet and running through the body, severe griping pains in bowels; after a short sleep awoke with

severe headache, high fever and great thirst, tongue stiff and unable to speak distinctly, "had a very strange and indescribable state of feeling, was very ill indeed," severe pain in stomach and bowels but no vomiting or purging, moved about with difficulty because of weakness, pain in head and dizziness; had first motion of bowels on the morning of the 25th with sharp pains in bowels, thirst continuing urgent.

26th.—Took Dovers powder last night which relieved pains, mind wandering during night, pulse 96; tongue presents same characters as other patients, ineffectual desire to vomit, especially after drinks, thirst very great, much pain in bowels on pressure but no looseness, saw patient at 4 p.m. with Dr. Howard, ordered Zinci Sulphas grs. xl. as an emetic to be taken immediately, to be followed by Oleum Ricini ℥ j. and tablespoonful doses of Carbolic mixture every four hours.

27th.—No better; medicines operated freely, mind wandered during the night, with sleeplessness and headache, great thirst and no appetite, bowels very loose; taking carbolic mixture.

28th.—Pains under left breast and in back and limbs to day, a pricking sensation in arms with darting pains, calves of legs sore to touch, four motions of bowels to day, stools light brown, thin and offensive, abdomen flaccid, tender on pressure, tongue very red at tip and edges, and coated, complete loss of appetite, languid and weak; taking beef tea, drinks cause immediate pain in stomach and bowels, pulse 92.

29th.—Symptoms continued, soreness felt in both legs, at a spot inside of leg above maleolus, and it appears to be slightly swollen, no pains in legs or thighs.

30th.—Pains in bowels, severe last night across the lower zone; slept well, no motions since yesterday; pulse 74, pain in left leg from the calf to ankle, none in the right.

31st.—Soreness and dizziness in forehead, no pain now felt after eating.

April 4th.—Bowels regular once a day, attended with pains, also feels a little headache and uneasiness in stomach, made an ineffectual attempt to walk yesterday, prevented by pains in the back of thighs.

5th.—Stiff and sore all over: spot in right arm painful, constant headache and severe pain in back, tongue feeling very stiff and clumsy, pulse 78.

7th.—Great oppression about the heart, shooting pains through back, stitches felt on taking a deep inspiration.

8th.—Pulse 96; head very sensitive to noise, increased soreness and stiffness in limbs and joints, feeling as if rheumatism were coming on.

9th.—Pulse 84; no fever, legs complained of, calves and knees stiff and painful, soreness of tongue at tip, other symptoms same as before.

12th.—Pulse 84, improved appetite, increased soreness of muscles, every part of body sore to touch, muscles most painful near junctions with tendons, eyes very painful, feeling sleepy and almost powerless at times, no appetite, stop carbolic mixture, and substitute Mixt Quinine, tablespoonful doses three times a day, and bathe eyes with lotio Aluminis.

18th.—Eyes better and improving daily, muscular pains and stiffness passing away.

21st.—Walked a little yesterday, suffered much in afternoon from pains and stiffness in joints and limbs, and exhaustion, appetite gone again, "pained all over," pulse 90.

22nd.—Feeling worse, pains in limbs of a rheumatic character, soreness of whole body to the touch, great oppression of the heart with darting pains and heat in back, is confined to bed, recommended bathing with warm water and frequent applications of ℞ Linamentum Saponis ℥ iv. Tr Arnica ℥ ij. Spts Vin Rct ad ℥ xii. to painful muscles; to continue wine, beef tea and Quinine mixture.

24th.—Less oppression of heart to day, frequent sighing still, pulse 70 sluggish, muscular pains increasing, momentary relief experienced from liniment and warm applications, very weak to day, no appetite, food gives pain in stomach, continue treatment.

29th.—Feeling better, less pain in limbs, stiffness remains, limbs swollen and slightly edematous in evenings, all gone in the morning, tongue sore at the tip, patient still very feeble, can move about the house slowly but with much pain and soreness in limbs.

May 14th.—Patient's limbs have been swollen and edematous for several days, quite so to day, patient is feeling quite well again with exception of the muscular soreness and great oppression of the heart, consented to allow an excision of a portion of muscle from the leg, which was done accordingly at my request (for certain reasons,) by Dr. Fenwick, from the tibials posticus muscle, and in presence of several medical friends.

This bit of muscle about 10 grs. was subsequently submitted to a careful microscopic examination by Drs. Girdwood, Howard, Fenwick, and Edwards, separately, and found to contain the veritable Trichinæ Spiralis in an advanced stage of development. *See Photographs.* In this case it is well to remark, that there has been in the latter stages extreme debility of the heart and general muscular system with frequent spells of weakness threatening a fatal termination by syncope, which has only been prevented by the liberal use of wine, essence of beef, and Tr Ferri Mur m x. c Quin Sulph grs j., every six hours.

*Diagnosis.*—This is not difficult, especially when it can be ascertained

that pork has been eaten. In these cases it was possible to reduce the ingestion of the cause first *to a definite time;* "they were in good health previous to dinner on the 24th March;" again, others beside those ill had been present at the same meal, but none of these had eaten any "ham" while all who had eaten "ham" were *without a single exception*, afterward taken ill, thus reducing the offending cause to the "ham"; it now remained to consider what it might contain that would produce such effects as here presented themselves upon the human system. These might have been caused by irritant mineral poisoning, as for instance, the salts of lead or antimony, or the burning thirst, heat of throat, and swollen tongue, by arsenic, and yet this was not probable as a dose of either of these sufficient to produce such violent symptoms would most likely have ended very speedily in death; while to leave no room for donbt upon this point the tests for their presence were carefully applied to samples of the urine, with negative result. Ingestion of putrid food might have accounted for the excessive nausea, vomiting, purging, and rigors followed by fever and thirst, but the ham was fresh and of the most wholesome appearance. The wandering pains and creeping numbness in the extremities, with the peculiar sensations in the stomach becoming painful but preceeded by tormina of the bowels, the peculiar appearance of the tongue, the choleraic symptoms, the order of appearance also of the symptoms, taken in conjunction with their severe character and persistence, all tended to confirm a suspicion of Trichinæ Spiralis as the offending cause. Proceeding upon this view of the case, I had the ham examined microscopically by Dr. Edwards, and called to my assistance the aid of Dr. R. P. Howard, professor of medicine, McGill University. *Treatment*—the indications seem to be to relieve the stomach and bowels as speedily as possible of all offending matters by emetics and purgatives, destroy if possible the parasite in the alimentary canal, allay fever, pain, and general disturbance of the system, support patient's strength, counteract local inflammations that may arise, as Gastritis, Enteritis, Peritonitis, Pleurisy, Diaphraphmitis or Pneumonia, and in later stages prevent extreme prostration and fatal termination by syncope.

## CORRESPONDENCE.

*To the Editors of "Canada Medical Journal."*

LABORATORY, 630 LAGAUCHETIÈRE STREET.,
MONTREAL, JUNE 1869.

GENTLEMEN,—The question of fees payable to professional witnesses, is one which the late inquest at St. James Club, brings prominently before

the profession. The fees payable to Physicians and Surgeons for attendance at Court in criminal cases three years ago were $4 per day. In Montreal they were changed to $1 a day for attendance at Court under subpœna, and $4 only when detained at Court to give evidence. Last year the Council of the Province of Quebec issued the following order:

*Extract of an order in Council of the Province of Quebec, dated 20th July*, 1868.

"The Honorable the Attorney General recommends that Physicians, employed by Coroners to make an autopsy or examination of bodies of persons on whom an inquest is held, shall be paid as follows: For an autopsy the sum of fourteen dollars; for an external examination of the body, four dollars; but the Coroner shall not employ more than one Physician for the inquest."

"For chemical analysis of the body a sum not to exceed fifty dollars shall be allowed. This is to include all chemical analysis connected with the case. When a chemical examination is deemed necessary, the Coroner shall inform the Attorney General, who shall name some Medical Practitioner to,be employed; not more than two experts shall be employed in any case."

"The Attorney General furthermore recommends that besides the allowance for indemnity to Crown witnesses according to chap. 107 Consolidated Statute of Lower Canada; a Medical witness giving professional evidence before the Court of Queen's Bench shall receive the further snm of two dollars per diem for his loss of time."

On referring to Chap. 197, Section 1, Consolidated Statutes of Lower Canada, we find the following:

"Unless the witness is poor and needy, he shall be entitled only to his actual travelling expenses from the place of his residence to the Court and back, and his just actual disbursement for board and lodging not exceeding the rate of one dollar per day, while detained in attending the Court at a place where he does not reside. Section 2. If the witness makes affidavit before the Court, Judge, Recorder, Inspector, Superintendant of Police, or Justice of the Peace, that he is poor and needy, he may also be allowed a reasonable sum for his trouble and loss of time, not exceeding in any case the rate of one dollar per day."

This order in Council has reference only to the ordinary post-mortem examination and to evidence given thereon, so far as the post-mortem examination is concerned. The surgeon or physician under whose care the patient happens to be, may fairly be called upon by society to give his time and trouble in any case he may have under his treatment in the course of his practice for the fee mentioned, for he is only in the same position as a passenger along the street who is eye witness to an accident or a murder and has therefore to attend and give his evidence.

But where a physician or surgeon is called in to make an examination in a case where he has not been in attendance previously, and as it were in a case ouside his regular practice, then he is in a different position; he is

called by the Government, to undertake a duty and give them advice, and at once is placed in the position of demanding that if his services are required, they must be paid for according to his own scale of charges irrespective of orders in Council, and may refuse to undertake the examination unless his demands are acceded to.

If he finds that a chemical analysis is necessary and he be not capable of conducting such investigation, as few physicians and surgeons are, he has to seal up the vessels in which he places the contents of stomach, viscera &c., and apply to the coroner to appoint some one to investigate the case for this purpose.

The order in Council provides for this also and says that for all the analyses required in any case a sum of $50 dollars shall be paid. The fees to be given for evidence in Court are fixed at $2 per day over and above what is allowed to ordinary witnesses viz 60 ccents, and if away from home $1 per day for board.

Now here is a manifest injustice, for if you accept the duty you are sworn to give evidence at the coroner's Court and are then subpœnaed to give evidence at the other Courts and must attend under a penalty; there is no refusal. After once the duty is accepted you become a tool in the hands of the law officers and can not refuse to give any information asked, (alternative,) or perjurey ourself and for this the Government gives you not what you ask as a just value of your services, but what they set upon your services as a value.

Having been employed in several cases by the Government both of Canada and of Quebec to make chemical analyses, I have been taken from home to make the analysis, and even to be present at the exhumation of the body and make such section of the body as I deemed necessary. I have had to take my apparatus from home to make the analysis in the country, and subsequently to give evidence, and medical opinions, and to consult with the lawyers for the prosecution, go over the evidence, and cross examine medical witnesses for the defence through the crown prosecutor. I have sent in my claim to the Government, and have had varying sums sent me, always less than my claim, by the Government in liquidation of my claims; feeling dissatisfied, I determined upon the first opportunity to try the question, and accordingly when I was handed the viscera in this case for examination, I at once wrote to the Attorney General, to state what my fees were, and to ask if these fees would be paid, at the same time strongly recommending that some one should be appointed with me to conduct the analysis. Failing to receive a reply, I called personally upon the Attorney General, who courteously informed me that he could not authorize any payments except in accord-

ance with the order in Council; he however did say, casually, that that order was illegal; what he meant by the observation I know not. He refused to appoint any one to act with me as he had he said, no authority under the order in Council. (illegal?) Under these circumstances I declined to undertake the duty, and was requested to hand over the matters I had received to Dr. D'Orsennens' partner Dr. Gauthier, in Dr. D'Orsennens absence, he having been appointed by the Attorney General as the second expert, between myself and whom the coroner was to choose. I communicated with Dr. D'Orsennens the reasons that led me to decline to undertake the case in a letter; he called upon me and I explained my letter to him, he asked me what I wanted him to do? I told him, just what he chose; I did not wish to bias his opinion in any way but simply wished him to understand the grounds upon which I declined to undertake the work, and also the fees upon which I was willing to undertake it. Be subsequently called upom me and told me he would not undertake it except on the same terms I offered; he did more, for I am informed he called on Dr. Coderre, Dr. Rottot, and Dr. Craik with a view of obtaining from them, promises not to undertake the case, except upon the terms mentioned in my letter to him, as the terms on which I was disposed to accept the case. Dr. Coderre and Dr. Rottot I understand gave the required promise, and Dr. Craik told him that he had been so badly treated in similar cases before, by the authorities that he would not undertake anything at all for them. On leaving me Dr. D'Orsennens told me that he would do nothing without consulting me; this he volunteered, and the result, he takes the case, without one word to me. I may say a few words in regard to the case seeing that I was present during the Inquest.

The unfortunate gentleman was seen asleep at 5 o'clock p.m., and from that time till 9 p.m. slept soundly snoring lustily, after a drive around the Mountain; at 9 p.m., a friend Dr. Horsey finds him snoring, awakes him, he gets up asks for a "pick me up," or refreshing dose, and the Dr. gives him one in the shape of 5 grains of quinine. In half an hour he goes out, and two hours after he is found snoring on a sofa in the club, he cannot be aroused, one physician present, calls a second also present, they have him removed, conclude by symptoms, he is suffering from the effects of some narcotic which contracts his pupils to a pin's point, and he dies at four a.m.

Dr. D'Orsennens states that he finds quinine in the urine, but none in the stomach, the interval between taking the quinine and death is seven hours, functions are much checked, quantity of urine in bladder is only ten ounces, in stomach is a pint of fluid, he takes nothing into stomach for seven hours. The Dr. accounts for the absence of quinine in stomach

on the grounds that in seven hours all the quinine would be absorbed, and passed through the circulation and separated by the kidneys.

I am sorry to see a professional brother place himself in such a position as the Dr. has here. Upon what grounds does he state this as a fact?

Doubtless he will find quinine as also most other matters in the urine in a short time after ingestion into the stomach, but when taken up, it passes into the blood, and wherever the blood circulates, ought to be found and should have been found in the stomach, or at least in that portion of the blood which was circulating in the gastric walls and tissues connected. The only conclusion that I can come to, admitting that the quinine was found in the urine by the Dr. and not in the stomach, is that, the quantity in the urine was excessive and that the Dr's tests were incapable of finding the small quantity present in the stomach, which must have been very minute considering that the one ten thousandth part of a grain may be detected and this patient seems to have had from three to five grains.

A five grain dose of quinine taken, will yield proof of its presence in the urine twenty-four hours after ingestion into the stomach. And therefore it should have been found in the stomach or circulating fluid in this case. It would be more satisfactory if the Dr. had given us the process by which he proved quinine to be present. In this case the physicians who attended the sufferer during life were of opinion that the patient died from the effects of opium in some form or other; the symptoms did not simulate any natural disease, but the chemist finds no morphia which should be present nor does he find anything deleterious; he only finds quinine which was given, and that only in the urine.

The jury find he died of hereditary epilepsy; but in the evidence of symptoms there is a want; that want is, that there is not a single symptom of epilepsy present.

Congestion of the brain evidently was present and a general engorgement of all the viscera, and these are the only symptoms the post-mortem examination yields. I have some further matters to give you concerning this case but have trespassed too much already in this. I wish to obtain your views, and through you, those of the profession on this subject of fees.

Your obedient servant,

G. P. GIRDWOOD, M. D..

*Foreign Body in the Œsophagus, Obstruction, Abscess, Œsophagotomy, Recovery.* By DONALD MACLEAN, M.D., L.R.C.S., Edinburgh, Professor of Surgery and Clinical Surgery in the Louisville Medical College.

On the 18th February, my colleague, Dr. Goodman, asked me to see E. R., a girl, æt. 23 months, who was supposed to have a piece of bone lodged in the œsophagus.

The history of the case, up to this date, is thus given by Dr. Goodman. On the 10th day of February, Mr. R., the patient's father, called at Dr. Goodman's office, late at night, and stated that the child had two days before, been eating mutton hash, when she suddenly became "choked till she was black in the face;" that the mother, becoming alarmed and excited, forced the mouth open and passed her finger as far as possible down the throat, where she felt what she supposes to have been a piece of bone similar to one that she had, on a previous occasion, succeeded in extracting, under similar circumstances, from the same child's throat. On the present occasion, however, she failed to seize the piece of bone, but felt it move downwards, beyond the reach of her finger; the child coughed violently for a few minutes and spat up a little blood, and then appeared quite relieved, but refused to swallow anything but fluids, and had gradually become more and more restless and feverish till the advice of Dr. Goodman was asked. An emetic was prescribed, and early on the 11th, Dr. G. visited the case and found extensive bronchitis, with the usual amount of accompanying general indisposition. He examined the throat as carefully as possible, but could find no evidence of obstruction of any kind and concluded that the child's unwillingness to swallow solid food was caused by want of appetite and not by loss of the *power of deglutition.* The bronchitis gradually subsided under treatment.

On the 16th, Dr. Goodman was again called and found well marked roseola, and noticed that there was some diffuse swelling of the neck, in the neighbourhood of the thyriod cartilage, on both sides, but chiefly on the left; the patient carried her head on one side, the left, and carefully avoided all motion, especially lateral. There was now, also, total inability to swallow even fluids, although the little patient, evidently suffering very much from thirst, was never tired of making the attempt. Nutritive and stimulant enemata were prescribed, with benefit.

On the 17th the symptoms continued, and in addition, her breathing became somewhat embarrassed, and on the morning of the 18th, I saw her with Dr. Goodman. The roseola had disappeared, but otherwise her condition was unchanged, except that the swelling of the throat was

greater and her breathing more embarrassed than when Dr. G. saw her on the previous evening.

The pulse was too rapid and feeble to be counted, the skin hot and dry, the tongue furred, the face livid and bearing an expression of restless anxiety, the breathing very much oppressed and accompanied by a loud whistling sound, suggestive of œdema glottidis, which, however, did not exist. The swelling of the neck was very difficult to define, owing partly to its depth and partly to the compression by the larynx and neighbouring muscles. Moreover, the child who, was very small of her age, had a remarkably short, thick and fat neck. At this and several subsequent visits paid during the day, the most careful manipulation failed to determine, positively, whether suppuration had actually occurred or to afford any precise information as to the condition of the deep structures.

On questioning the mother during my first visit, she informed us, that while endeavouring to swallow one of the doses prescribed by Dr. Goodman for the bronchitis, the child had "coughed up a small splinter of wood."

During the day, hot, soothing applications to the surface and inhalations by the atomizer were sedulously employed with the effect of affording a slight degree of temporary relief. Towards evening, however, I was sent for in a great hurry and informed that death, by strangulation seemed imminent. It was now quite evident that there was but one resource left, viz: operation, and that there was no time to be lost. I proposed to cut right down through the swelling, partly with the hope of discovering and extracting a foreign body, but mainly with the confident expectation that a deep-seated abscess would be evacuated, and immediate relief afforded to the function of respiration.

In this proposal Goodman acquiesced, and I immediately proceeded to carry it into execution, feeling deeply that my position was one of more than ordinary responsibility. The age and exhausted condition of the patient, the unsatisfactory history, the indefinite character of the swelling, and the obscurity of the ordinary anatomical landmarks produced thereby, the close proximity of important anatomical structures, all combined to render the operation one of extreme difficulty and danger.

Chloroform having been administered, I made an incision on the left side along the anterior margin of the sterno-mastoid muscle, extending from the level of the upper border of the thyroid cartilage down to a point opposite the lower border of the cricoids. I cut at once through the skin, platysma and fascia, pressed upwards the omo-hyoid muscle, divided the fibres of the sterno-hyoid and sterno-thyroid muscles; with the forefinger of my left hand pressed the carotid artery outwards as

far as possible, and on the point of the same finger guided the knife downwards, inwards, and backwards, to the projecting wall of the œsophagus, from which, on the application of the edge of the knife to it, I hoped to witness a discharge of pus. The instant the opening was made there was a loud gurgling eructation of gas and an increased flow of blood from the wound, and the next moment all present became painfully sensible of a stench of the most penetrating character, and this was immediately followed by the discharge from the wound of about two tablespoonfuls of dark, grumous, fœtid pus. I then introduced my finger into the wound and right into the interior of the œsophagus, but could not discover a foreign body of any kind. Convinced, however, that the main object of the operation had been attained, and that, in case a foreign body was present, a more favorable opportunity of exploring for it would be afforded subsequently, we gladly desisted from further manipulation, and permitted nature to restore consciousness without interference of any kind. No vessel required to be tied. The result was precisely what we had anxiously anticipated; the breathing became quite natural, the whistling sound (produced no doubt by compression of the windpipe) entirely ceased, and when consciousness returned it was found that the function of deglutition was fully restored. The little sufferer was now able to enjoy a copious drink of milk, although with every act of deglutition a small quantity was discharged by the wound.

19th—Morning. Slept very well; wound discharging copiously; drinks freely, but refuses solid food; can't speak above a whisper; bronchitis lighted up again, and is general in both lungs; pulse very rapid, but stronger than yesterday. Ordered beef tea, and expectorant mixture, poultices to neck, and counter-irritation (mustard) to chest. Evening—Breathing suddenly much embarrassed; high fever; countenance livid; pulse extremely small and rapid; discharge from wound almost entirely arrested. On passing a probe into the wound it was found that a valvular closure had been formed, probably by the contraction of the neighbouring muscular structures; the introduction of the probe was followed by a gush of healthy pus, and instantaneous relief of the urgent symptoms. A pledget of lint was then inserted to prevent the recurrence of this accident, and was replaced at each dressing for the next few days. After this date everything went on well, the discharge poured away very freely for some days, and then gradually diminished in quantity, and the wound closed up from the bottom, of its own accord, after having been probed in all directions on several occasions, but without result so far as any foreign body is concerned; the bronchitis slowly subsided, the voice returned, and now, March 10, the child is quite well.—*Abridged from Louis-ville Medical Journal.*

# PERISCOPIC DEPARTMENT.

## Medicine.

### TWO CASES OF INCONTINENCE OF URINE FROM EARLIEST CHILDHOOD, CURED BY MECHANICAL DILATION.

Guy's Hospital—under the care of Dr. Braxton Hicks.

A cause of incontinence of urine is indicated in the following cases which is not generally recognized. The treatment which Doctor Hicks applied was very successful, and we have no doubt the record of it will be of great service to practitioners who have patients suffering from this very troublesome condition.

Case 1.—M. A——, about twenty-two years old, had suffered ever since she can remember from incontinence of urine, and almost incessant desire to micturate during the day. Had been under a great amount of treatment. She was admitted into Guy's Hospital under one of the surgeons, who examined for stone, but found none, nor any disease of the bladder, but a contracted one. Dr. Hicks offered to take charge of her. He began first by injecting solution of morphia, which lessened the irritability to a great extent, so much that she was for two or three nights free from her distress. However, no further progress was made, but rather retrocession. Dr. Hicks then ordered the bladder to be distended as much as possible by plain warm water. This was done by his clerk, Dr. Chas. Smith, very carefully, daily. Almost directly she derived benefit, and in the course of a week she was quite well. The treatment was kept up for a week more and she went out. After three months the nocturnal incontinence returned, and she was readmitted; but the bladder became rather more irritable. Morphia was again used, but not acting so well as before, an injection of nitrate of silver, twenty grains to the ounce of water, was employed. This caused some pain after, but in a week she improved, with occasional trouble at night. She could hold half a pint of urine at a time in the day, but not so much at night. However, by an occasional injection of morphia she gradually regained the power of retention, and went out again free from her complaint. It was curious that for two or three days of the latter part of her treatment she was troubled with complete retention of urine; this, possibly was of a nervous character.

Dr. Hicks remarked that the constant evacuation of urine permitted by some mothers to their children allowed the bladder to become so constantly empty, that after a time the muscular power of the sphincter was not sufficient to counteract the contractility of the organ. In recent

cases, no doubt this would be voluntarily overcome by adults; but in old-standing cases, although we do much by lessening the sensibility of the bladder, yet we might proceed at once to overcome its resistance by mechanical force, so that further treatment would not be required. This was strongly shown in the following case, which recently was under his care in Guy's Hospital.

Case 2.—The history was precisely similar to that of the last. The bladder was at once injected with water; it shortly held half a pint. The incontinence was rapidly cured; and the patient went out to service.

Both these girls had been unfit for service from their complaint. Dr. Hicks suggested the applicability of this treatment to both sexes, in cases with similar history; at any rate it would be harmless unless violence were used. He thought it was possible that in some of the cases there were congenitally small bladders, and these possibly might be more difficult to manage.

There is much more difficulty in treating the contracted state of the bladder in chronic cystitis. A great deal can, however, be effected by injections of various kinds, as was shown in the following instance:

C. C——, aged twenty-six, had cystitis after delivery, which caused her great pain, and intense desire to void urine every half hour. Various remedies were tried; styptics and sedatives to the interior of the bladder. Nitrate of silver injection (thirty grains to the ounce) was most beneficial. The distress it caused was considerable; but she preferred it, as giving most subsequent relief. Morphia solution was always left in afterwards; and also at other times, to lessen, the sensitiveness; occasionally mechanical distension was employed, but it was found nearly impossible to inject beyond three ounces at a time. After three months she could retain urine nearly three hours, when Dr. Hicks thought it might be possible to distend the bladder to a greater extent under chloroform. This was tried; but three ounces was the greatest quantity admitted. There was a great deal of irritation after, and she was not so well as before. After a week she could hold her water only for an hour and a quarter. Afterward she improved, and could manage to retain urine for an hour and a half, when she left the hospital.

Whether the resistance of the bladder was simply from the thickened walls, and from this and inflammatory adhesions also, did not appear clear in the case. The resistance was very firm. She had, however, gained something altogether by the treatment; but not so much as she would have done had no attempt been made to distend the bladder.—*Medical Times and Gazette.*

# Canada Medical Journal.

MONTREAL, JUNE, 1869.

## CORONERS' INQUESTS AND MEDICAL FEES.

We submit to our readers a most important letter from Dr. Girdwood, on the subject of Medical fees for services rendered by physicians, before our courts of law, in criminal cases, and a translation of a copy of the order in council of the Province of Quebec, bearing date 20th July, 1868. We cannot see upon what principle of equity the Honourable the Attorney General, for the Province of Quebec, issues the above order; it has reference alone to criminal jurisprudence, and we are under the impression that the Council for the Province of Quebec, have overstepped their perogative in this instance. We believe that all matters connected with criminal prosecution, are under the care and supervision of the general government; if they are not they should be. Crime committed in one portion, of the Dominion, possesses the same moral bearing as in any other section of the country. The House of Commons enact laws for the repression of crime, and the law officers of the several Provinces, have alone to carry out these laws for the general weal. But it is no part of the role of the Local Legislatures to enact laws or issue orders in council, which will in any way interfere in the just and equitable administration of justice. In cases of a criminal nature, where the life or liberty of a subject is at stake, and where skilled evidence is necessary, it is in every way desirable that the best evidence that the country can procure should be forthcoming, therefore we must take exception to the miserable peddling policy of limiting the remuneration to a stated sum which will not be accepted by men whose evidence is worth receiving. With regard to the remuneration to be paid to a medical witness before the coroner's court, we have nothing to say, as we think the amount specified is sufficient. It is, however, wrong to limit the coroner to the selection of one medical witness. Cases may arise wherein the evidence of two physicians may be a necessity. The coroner should therefore possess the authority, (and we doubt much, whether he does not possess that authority,) of using his own discretion in any given case, and summon to his aid two or more physicians if necessary.

In the matter of Chemical Analysis where such is deemed necessary, no stated fee can be admitted on any principle of equity. Investigations of this kind can only be undertaken by chemical experts who have devoted their attention to these subjects, and who are familiar with chemical manipulation. It is a special department, and requires a special training with the familiar use of the various instrumental aids which science and art have designed. It is not to be expected that in any serious case, a chemical expert can, in justice to himself and to the country, undertake work for a special fee, which will not yield him laborers' wages. Chemical analysis will sometimes occupy days or weeks of patient and laborious investigation. It naturally follows that, unless he (the expert) is adequately remunerated for his labor, the work will be hurried through, performed in a slovenly manner, or altogether neglected. If then a stated fee is to be the rule in such cases, we will retrogade to those dark ages, when the poisoner and murderer could stalk abroad and perform his deadly work, without fear of detection. In the case alluded to by Dr. Girdwood, may be seen the first fruit of the Quebec cheese-paring policy, and had this been a case of a more grave nature, one in which were bound up the interests of society, or of an individual wrongfully accused, the result would have been equally embarassing. The Government cannot expect to secure the services of efficient men, in the face of this objectionable order in Council.

With regard to the allowance of indemnity to medical witnesses, giving professional evidence and attendance in the Court of Queens' Bench, the order is a farce, and no medical man of any respectability, and whose evidence is calculated to allay public excitement and carry any weight, will, if he can shift out of it, place himself in a position of thus earning two dollars per diem, for his loss of time.

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## THE LATE ELECTIONS TO THE MEDICAL COUNCIL OF ONTARIO.

Besides the representatives appointed by the several Universities and Colleges upon the Medical Council, there are twelve elected by the medical profession of Ontario, there being twelve electoral divisions. As a result of the elections which took place on the 8th of this month, there has been returned only four of the late members of the Council, of those who degraded themselves by consenting to become associated with homœopaths and "eclectics." We recognize this as an indication of a healthy and dignified feeling among our brethren of Ontario, and as a condemnation of the unprofessional conduct of such men as McGill,

Clarke, Aikins, and their humble followers. Elsewhere we give a list of all the members of the new Medical Council including those from the two sects, the "homœopaths" and "eclectics." Also, we give place to a protest made by Dr. Agnew, of Toronto, against the voting by two homœopaths, who although licensed as regular practitioners availed themselves of their alliance with the homoeopaths to vote as such; and one of whom is actually a representative. Surely honorable men would not have placed themselves in such a dishonorable position. Here we see the first proof of the crudeness and imperfect nature of the bill, which officious men have forced upon the profession of Ontario.

We shall look with some interest to the meeting of this mongrel council. Some of the gentlemen elected, intend, we are informed to act under protest against the coersed union the Legislature has effected. We have yet to be convinced there exists one truly sincere and educated member of our profession, who will consent to remain in association with men for whom they can have no respect. The occasion is one of extraordinary importance, which will require a calm, dignified, but firm and uncompromising adherence to principle.

The gentlemen selected to form the medical council from our ranks, may depend upon it, the eye of the profession will be upon them. If we mistake not some, if not all of the four, who have been re-elected, secured their election by expressing strong views against the homœopathic clauses of the Act, although they had previously committed themselves to the measure. These persons have now the opportunity of retrieving their lost reputation. But if they, or any one else, manifest a disposition to fraternize with quackery—with men who, while professing to be the followers of Hahnemann, adhere not to his teachings; with Thompsonions who falsely declare they give only vegetable drugs, with any sect who say "we are not as other men," we promise them the benefit of a notice, and the credit of recreancy.

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## MEDICAL COUNCIL OF ONTARIO.

### *Protest of Dr. Agnew.*

HOMŒOPATHS VOTING AS REGULAR PRACTITIONERS.

Toronto, June, 8, 1869.

To L. Brock, Esq., M.D.,
Returning officer,
Midland and York Division.

Sir.—I hereby protest against the reception of the vote of Dr. Duncan Campbell, Homœopathic practitioner and president of the Homœopathic Board, and of Dr. Charles B. Jones, Homœopathic practitioner, both of this city.

First: Because the meaning and intent of clauses or sub-sections 2 and 3 of section eight of the Ontario Medical Act, clearly deprives Homœopathic practitioners from exercising the franchise in respect of any of the elections of the twelve members referred to in said sub-section 3.

Second: Because the said Dr. Duncan Campbell, and the said Dr. Charles B. Jones, were improperly permitted to register as "Allopathic" members of the College of Physicians and Surgeons, since the passage of the Ontario Medical Act, whereas they were both, long prior to the passage of said Act, and still are, recognized members of the Homœopathic body, and provision is made for their proper registration, in sub-section 3, section twenty-three of the said Act.

I therefore, protest against the votes of the said Dr. Duncan Campbell and Dr. Charles B. Jones, being recorded.

I am sir,

Your obedient servant,

J. N. Agnew, M.D.

*Note by the Editors.*—Notwithstanding this protest the persons mentioned did record their votes in favor of Dr. Morton who was defeated. Is L. Brock Esq., M. D., the editor of the *Dominion Medical Journal?*

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The Medical Council Elections.—The full returns from the twelve Electoral Divisions in Ontario, entitled to send representatives to the Medical Council, are as follows:—

1 Western and St. Clair, Chatham—Dr. Edwards; 2 Malahide and Tecumseth, London—Dr. Hyde; 3 Saugeen and Brock, Guelph—Dr. Clarke; 4 Gore and Thames, Woodstock—Dr. Covernton; 5 Erie and Niagara, Brantford—Dr. Pyne; 6 Burlington and Home, Hamilton—Dr. James Hamilton; 7 Midland and York, Toronto—Dr. J. N. Agnew; 8 Kings and Queens, Whitby—Dr. McGill, M.P.P., 9 Newcastle and Trent, Cobourg—Dr. Dewar: 10 Quinte and Cataraqui, Kingston—Dr. H. Day: 11 Bathurst and Rideau, Ottawa—Dr. Mostyn: 12 St. Lawrence and Eastern, Brockville—Dr. Brouse: The University of Ottawa—Dr. Grant; Queen's College—Dr. Bethune; Victoria College—Dr. Berryman.

Eclectic Representatives.—N. Hopkins, M.D., Dunville; G. A. Carson, M.D., Whitby; J. J. Hall, M.D., St. Mary's; S. S. Cornell, M.D., Toledo, and R. H. Clark, M.D., Cobourg.

Homœopathic Representatives.—Dr. Campbell, of Toronto; Dr.

Field, of Woodstock, Dr. Allen, of Brantford; Dr. Springer, of Ingersoll, and Dr. Adams, of Toronto.

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## HOWARDS PATENT VENTILATOR.

Our friend Dr. Henry Howard, who has charge of the Lunatic Asylum, at St. John's, has come out as an inventor, and in a phamplet which we have received from him, he describes a new method of ventilation, which he has had patented in this country and in England. We also notice that the invention has received the unqualified commendation of the Prison Inspectors, who witnessed its operations, as well as that of Dr. Smallwood, Professer of Meteorology in McGill College, who eulogises its working, upon scientific grounds. Its construction is exceeding simple. It is designed to be placed in the upper part of windows and is so arranged as to admit air upwards and inwards vertically. Its advantages are the *perfect distribution* of pure air through all the rooms of a building, freedom from draught, and the absorption in the passage upwards of all impure gases, agueous vapours, &c., latent in the atmosphere; the former by a box of charcoal and the latter by a sponge conveniently arranged.

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## UNIVERSITY OF McGILL COLLEGE.

The annual convocation for the conferring of degrees in medicine was held in the William Molson Hall, of the University, on Tuesday, the 4th of May—the attendance being large, Dr. George W. Campbell, the Dean of the Faculty, made the following annoncements. The total number of Students in the past session was 151—viz: 58 from Quebec, 81 from Ontario, 2 from Newfoundland, 5 from Nova Scotia, 1 from New Brunswick, 3 from Prince Edward Island, and 1 from the United States.

The number of Students who passed their Primary Examination, which includes Anatomy, Chemistry, Materia Medica, Institutes of Medicine, and Botany or Zoology, was 39, alphabetically arranged as follows:

Backhouse, John B., Simcoe, O.; Baird, James, Fitzroy Harbor, O.; Barclay, George E. London, O.; Bergeron Joseph, St. Marie, Q.; Buckley, Wm. P., Prescott, O,; Case, Wm. H., Hamilton, O.; Clarke, Richard A., Trafalgar, O,; Clarke, Octavius H. E., Montreal, Q.; Cluness, Daniel, East Williams, O.; Collins, Charles W., Quebec, Q.; Comeau, John B., River David, Q.; Corlis, Josiah, Simcoe, O.; Cowley, Thomas, Ottawa, O.; Dunsmore, John M., Mitchell, O.; Faulkner, Geo. W., Belleville, O; Graham, Adam C., Fort Erie, O.; Henderson,

Alexander A., Fitzroy Harbor, O.; Howitt, Wm. H., Montreal, Q.; Loux, Wm., Ottawa, O.; Levitt, William, Ancaster, O.; MacFarlane, Wm., Clarendon, O.; Main, John, R., Melbourne, Q.; Marston, Alonzo, Hull, O.; Mathieson, Neil, Embro, O.; McEwen, Finlay, Ashton, O.; McIntosh, Donald J., Vankleek Hill, O.; McNab, Francis A. L., Ottawa, O.; Miller, Robert, Galt, O.; Moore, Robert C., London, O.; Perrigo, James, Montreal, Q.; Rooney, Robert F., Compton, Q.; Seager, Francis R., Sarnia, O.; Stafford, Wm. A., Montreal, Q.; Stevenson, Robert A., Cayuga, O.; Sutherland, William, Montreal, Q.; Youker, William, Belleville, O.

The following are the names of Students wdo reecived the Degree of M.D., C.M., their residences, and the subjects of their Theses:

Alloway, Thomas Johnson, Montreal, Pycemia; Archer, Thomas, Montreal, Opium; Ardagh, Johnson, Orillia, O., Hysteria; Baynes, Geo. Aylmer, Montreal, Variola; Bradley, Wm., Fenagh Vale, O., Necrosis; Buckle, John M. C., Ottawa, O., Mortification; Bull, George Joseph, Montreal, Amblyopia; Campbell, John, Osborne, O., Alcohol in Health; Cherry, William, York Mills, O., Dysentry; Clement, Victor A., St. Guillaume, Q., Menstruation and Amenorrhœa; Collins, Charles W., Quebec, Circulation of the Blood; Cooke, Sidney P., Ottawa, O., Indigenous Medical plants of the Ottawa Country; Corlis, Josiah, Simcoe, O., Carbolic Acid; Cox, Frank, Charlottetown, P.E.I., Digestion; Dansereau, Chs., Verchères, Q., Inflammation; Finnie, John T., Montreal, Diphtheria; Fraleigh, William S., Picton, O., Influenza; Fraser, Donald M., London, O., Stricture of the Urethra; Hammond, James H., Montreal, Epidemic Cholera; Harkness, Andrew, Matilda, O., Ovariotomy; Hunt, J. H., L.R.C.S.I., 1st Batt. Rifle Brig., Suppurative Infln. Liver; Keefer, William N., B.A., Galt, O., Gunshot Wounds; Kittson, John G., Minnesota, U.S., Animal and Vegetable Nutrition; Lucus, Thomas D'Arcy, Wellington, O., Trichiniasis; MacCrimmon, Donald A., Logan, O., Tabes Mesenterica; Macfie, James, Clarenceville, Q., Cholera Infantum; McFarlane, William, Clarendon, Q., Uterine Hœmorrhage; McKay, John, South Finch, O., Typhoid Fever; McLaren, Peter, New Perth, O., Phthisis Pulmonalis; McNeece, James, Quebec, Cod Liver Oil; McTaggert, Alex., East Williams, O., Cholera Infantum; Meane, John, M.R.C.S.L., 78th Highlanders, Dysentery; Moore, Robert C., London, O., Necrosis; Morrison, David R., Montreal, Erysipelas; Proudfoot, Alex., Southampton, O., Opium; Rodger, Thomas A., Montreal, Puerperal Hœmorrhage; Scholfield, David T., Fonthill, O., Stricture of Urethra; Stewart, James, Ottawa, O., Physiology and Pathology of the Blood; Tabb, Silas E., Montreal, Diarrhœa Infantum.

The Holmes Gold Medal was awarded to by Thomas D. Lucus of Wellington, Ontario. The prizes for the best Primary Examination were awarded to Alexander A. Henderson of Fitzroy Harbor, Ontario; and for the best Final Examination to Andrew Harkness, of Matilda, Ontario. The following gentlemen were considered worthy to compete for the Holmes Gold Medal; Messrs. Harkness, Cherry, Bull, Stewart, McKay, Cooke, Finnie, Buckle and Keefer.

The following passed the best Primary Examinations, viz: Messrs. Youker, Sutherland, Backhouse, Baird, Loux and Stevenson. The names are arranged in order of merit.

The Demonstrators, 1st. prize for Practical Anatomy, in the Senior Class was divided between Mr. Andrew J. Cattanach, and Mr. Henry R. Brissett. In the Junior Class the 2nd prize was awarded to Mr. George A. Stark.

Dr. Colin C. Sewell, M.D. (Edin.), received the *ad Eundem* Degree of M.D. C.M. The Sponsio Academica having been administered by Dr. Wright, the candidates were called forward and had the Degree of M.D., C.M., conferred upon them by Principal Dawson.

Dr. John Campbell then addressed the graduates in a few well chosen remarks, after which the valedictory on behalf of the Faculty, was delivered by Professor Howard. This we publish in the present number of the Journal. This closed the proceedings of convocation so far as the Medical Faculty was concerned, the remainder of the afternoon being devoted to the Faculty of Law.

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## VICTORIA UNIVERSITY.

The commencement exercises of this University took place in Cobourg the first week in May, and proved highly satisfactory to the friends of the Institution.

### BACCALAUREATE.

On Sunday evening last the Baccalaureate sermon was delivered in the W. M. Church, by the Rev. W. M. Punshon, M. A. The large church was completely packed, a considerable number being obliged to leave for want of room. The text was 1st Corinthians, 12th chapter, 31st verse. "But covet earnestly the best gifts, and yet show I unto you a more excellent way."

### ADDRESS TO THE ALUMNI.

On Tuesday afternoon, the annual address to the Alumni was delivered by the Rev. A. H. Reynar, M. A., Professor of Modern Languages

and English Literature, who chose for his subject, " The Relation of the Beautiful to the Good." It was an exceedingly finished composition, and displayed a vast amount of thought, deep research, and metaphysical acumen. At the close of this address, the annual meeting of the Alumni Association was held. The election of officers for the coming year resulted as follows:—President, Rev. W. M Punshon, M.A.; 1st Vice-President, J. J. McLaren, LL. B.; 2nd Vice-President, Dr. Brouse ; Secretary, H. Hough, Esq., M. A.; Treasurer, J. W. Kerr, Esq., M. A. ; Committee, Alumni resident in Cobourg ; Lecturer for 1870, Dr. Cannniff. A hearty vote of thanks was then given to the retiring officers, for the excellent manner in which they discharged their duties during the past year.

### ALUMNI DINNER.

At eight o'clock, between sixty and seventy gentlemen, members of the University and Alumni, sat down to a sumptuous dinner, provided by mine host of the Pauwel House. After doing ample justice to the eatables, the intellectual entertainment was commenced by the chairman (Mr. Punshon) proposing the usual loyal toasts, prefacing each with some eloquent remarks most appropriate to the subjects. A number of other toasts, suitable to the occasion, were proposed and responded to. Amongst those who took part in the affair were, Drs. Canniff, Berryman, Peltier, Brouse, Lavell and Platt ; Professors Nelles, Burwash, Perkins, and Ormiston ; Rev. Mr. Parker, Dr. Green.

### THE CONVOCATION.

The Convocation was held in Victoria Hall, on Wednesday afternoon. It is estimated that over a thousand people were present. Many had come from the Province of Quebec, and some from New Brunswick, while all parts of Ontario were represented. The ladies, formed a large proportion of the gathering. On the platform we noticed President Nelles, who presided; the Rev. W. M. Punshon, M. A.; Dr. Beatty, Prof. Lavell, Queen's College ; Dr. Brouse, Prescott ; Dr. Peltier and Prof. Jenkins, Montreal; Drs. Berryman, Canniff, Barrick and Fulton, of Toronto, and some others.

The following degrees were then conferred in medicine.

M. D.—W. Anderson, G. Archambault, S. Ambuchon, J. M. Aylesworth, W. Bald, E. Boissy, R. P. Boucher, G. Brown, F. Butler, J. A. Carroll, T. Carter, C. L. Coulter, E. H. Dansereau, W. Ferron, P. O'Keefe, J. M. Platt, E. Plaute, J. A. A. Peltier, L. Proulx, J. Russel, W. B. Towler, G. B. Frazer, W. W. French, E. Gervais, P. Giroux, A.

Graham, G. Halley, J. Hanley, W. T. Harrison, W. W. Hepworth, W. Henderson, E. Hurtubise, T. Kiernan, J. J. Kingston, S. Santoine, G. Stewart, P. H. Spohn, A. Tremblay, F. X. Trudel, W. W. Turver, A. S. Kirkland, E. Lachapelle, W. Lamontagne, J. Landot, A. Larose, W. B. Lindsay, W. M'Camus, T. Marchesseault, A. Munier, D. Mitchell, A. Moreau, P. B. Mignault, G. A. Neal, R. Ough, J. B. Tanguay, J. H. Watson, J. H. Webb, J. H. Widdifield, J. W. Wood.

After this, Dr. Berryman addressed the medical graduates. He said they are now entering on an honorable profession and one of great responsibility. They are only at the commencement of their career. They have the study of the most beautiful and interesting object in nature, namely, man himself. They owe great duties to society ; they must be careful and gentlemanly, never display any coarseness of manner. Set a good example and avoid temptation, They have many trials and dangers, all of which must be overcome if success is desired. Be economical. The great point and essential one in medical ethics, is to " do unto others as you would that they should do unto you."

Mr. Punshon was then called upon for an address, and as usual, made a splendid speech.

### THE CONVERSAZIONE.

The Grand Conversazione in the evening, held under the auspices of the Literary Association, was a most brilliant affair. Some five hundred ladies and gentlemen were present. The evening was principally passed in promenading and social chat. A Band supplied excellent music.

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### ERRATA.

A very stupid error crept into our last number, in the article on the mortality of Montreal. After alluding to the very unenviable position occupied by our city, in a sanitary point of view we stated that according to the report of the Sanitary Association, its annual mortality was 25 per thousand. This figure bore absurdity on its face, for if it had been correct, Montreal would not have been deserving of the severe language we made use of. The correct reading should have been, " the mortality of Montreal during 1868, was 39.6 per thousand." This is some 7 per cent above Manchester, England, which is considered to be one of the most unhealthy towns in England, and 15 per cent above the average of the chief cities in Great Britain. As we said before, our mortality is frightful and it is time energetic means were taken to lessen it.

## GONE TO EUROPE.

Dr. Fraser, Professor of the Institutes of Medicine, McGill University, sailed for Europe, in the "Nestorian" from Quebec on the 19th June. He intends being absent until autumn. This is the Doctor's first visit to the old country, since he settled in Montreal, about thirty years ago. We wish him a pleasant trip, and a safe return to his family.

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## GONE ABROAD.

Dr. T. J. Alloway, Dr. Baynes and Dr. Keefer, B.A., graduates of McGill, this year, sailed for Europe in the Prussian, the end of May.

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## APPOINTMENTS.

Dr. Chesley, M.D. (McGill—1862,) has been appointed Surgeon, on the Steamship Hibernian, in place of Dr. Lynch, of Toronto, who retires. This latter gentleman has made hosts of friends, during his term of ocean service, and now that he is again a landsman, we wish him all possible success, in practice.

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Dr. T. G. Roddick, of Harbor Grace, Newfoundland, has received the appointment of Assistant House Surgeon to the Montreal General Hospital.

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It is with deep regret we have to chronicle the death of Gilbert Finlay Girdwood, M.D., of Howly Place, Maida Hill, London. Dr. Girdwood was the father of our friend and fellow townsman, Dr. G. Prout Girdwood, and was a most successful practitioner, and also a worker in the field of science. He contributed many papers on the subject of Cholera and the use of saline injections into the veins in that malady.

# CODE OF ETHICS

OF THE

# AMERICAN MEDICAL ASSOCIATION,

ADOPTED MAY, 1847.

# CODE OF MEDICAL ETHICS.

## OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

### ART. I.—*Duties of physicians to their patients.*

1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge, depend on their skill, attention, and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect and confidence.

2. Every case committed to the charge of a physician should be treated with attention, steadiness and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services;—none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance, should ever be divulged by the physician except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great, that professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice.

3. Frequent visits to the sick are in general requisite, since they enable

the physician to arrive at a more perfect knowledge of the disease—to meet promptly every change which many occur and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when executed by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For, the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquillity of the most resigned in their last moments. The life of a sick person can be shortened not only by the acts, but also by the words or the manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty, which is independent of, and far superior to, all pecuniary consideration.

6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offence, if they be proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ART. II.—*Obligations of patients to their physicians.*

1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties towards the community, and who are required to make so many sacrifices of comfort, ease, and health, for the welfare of those who avail themselves of their services, certainly have a right to expect and require, that their patients should entertain a just sense of the duties which they owe to their medical attendants.

2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should, also, confide the care of himself and family, as much as possible, to one physician; for a medical man who has become acquainted with the peculiarities of constitution, habits, and pre-dispositions of those he attends, is more likely to be successful in his treatment than one who does not possess that knowledge.

A patient who has thus selected his physician should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms, and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease which might have been readily prevented had timely intimation been given to the physician.

5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories, than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business nor the history of his family concerns.

6. The obedience of a patient to the prescriptions of his physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent, they are very apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse. Patients should never allow themselves to be persuaded to take any medicine whatever, that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much misehief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending him—and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

9. Patients should always, when practicable, send for their physician in the morning, before his usual hour of going out; for, by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character, that no mere pecuniary acknowledgment can repay or cancel them.

## OF THE DUTIES OF PHYSICIANS TO EACH OTHER, AND TO THE PROFESSION AT LARGE.

### ART. I.—*Duties for the support of professional character.*

1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members;—should avoid all contumelious and sarcastic remarks relative to the faculty as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

2. There is no profession, from the members of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow-creature.

3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and remedies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

4. Equally derogatory to professional character is it for a physician to

hold a patent for any surgical instrument or medicine; or to dispense a secret *nostrum*, whether it be the composition or exclusive property of himself or of others. For, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

ART. II.—*Professional services of physicians to each other.*

1. All practitioners of medicine, their wives, and their children while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously; as such unasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But, if a distant member of the faculty, whose circumstances are affluent, request attendance, and an honorarium be offered, it should not be declined; for no pecuniary obligation ought to be imposed, which the party receiving it would wish not to incur.

ART. III.—*Of the duties of physicians as respects vicarious offices.*

1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy, with-

out awarding to the physician who officiates, the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety, and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ART. IV.—*Of the duties of physicians in regard to consultations.*

1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practise from some medical board of known and acknowledged respectability, recognized by this Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry.

2. In consultations, no rivalship or jealousy should be indulged; candor, probity, and all due respect should be exercised towards the physician having charge of the case.

3. In consultations, the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered which are not the result of previous deliberation and concurrence.

4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No deci-

sion, however, should restrain the attending physician from making such variations in the mode of treatment, as any subsequent unexpected change in the character of the case may demand. But such variation, and the reasons for it, ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But, as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in *writing* and *under seal*, to be delivered to his associate.

6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants—they must equally share the credit of success as well as the blame of failure.

8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen, that two physicians cannot agree in their views of the nature of a case, and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a con-

scientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire; and, if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confide. But, as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation, or participation in the management of the case.

9. As circumstances sometimes occur to render a *special consultation* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases, should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion both of time and attention, at least a double honorarium may be reasonably expected.

10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities, which are too often practised by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

### Art. V.—*Duties of physicians in cases of interference.*

1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

2. A physician in his intercourse with a patient under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made—no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances, and

when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

4. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired. Under such circumstances, no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

6. It often happens in cases of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances, courtesy should assign the patient to the first who arrives, who should select from those present, any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

[The expression, "patient of another practitioner," is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.]

8. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who is under the regular direction of

another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no future direction, unless it be expressly desired; and, in this last case, to request an immediate consultation with the practitioner previously employed.

9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of physician can never be supported as an exclusively beneficent one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed with which might justly be claimed.

10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

### Art. VI.—*Of differences between physicians.*

1. Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a *court-medical*.

2. As peculiar reserve must be maintained by physicians towards the public, in regard to professional matters, and as there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject-matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

### Art. VII.—*Of pecuniary acknowledgments.*

Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

## OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

### ART. I.—*Duties of the profession to the public.*

1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations—the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions—in relation to the medical police of towns, as drainage, ventilation, &c.—and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

2. Medical men should also be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice, on subjects strictly medical—such as involve questions relating to sanity, legitimacy, murder by poisons or other violent means, and in regard to the various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a *post-mortem* examination, it is just, in consequence of the time, labor, and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

3. There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to the performance of such good offices. Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to ensure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and impostors. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ART. II.—*Obligations of the public to physicians.*

1. The benefits accruing to the public, directly and indirectly, from the active and unwearied beneficence of the profession, are so numerous and important, that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and empiricism—to afford every encouragement and facility for the acquisition of medical education—and no longer to allow the statute-books to exhibit the anomaly of exacting knowledge from physicians, under a liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

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